

G. H. BALAZS
TATTOO FILE
1970s-1980s

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M33 cop 2

A

Hawaiian Tattoo Motifs
by John McLaughlin
1973 50p.

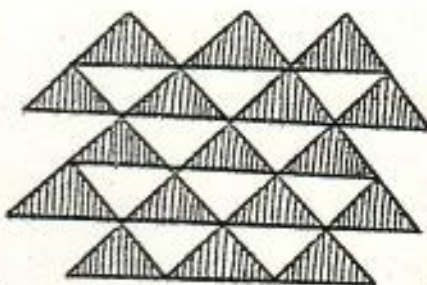


LES SANDWICH, UN OFFICIER DE ROI EN GRAND COSTUME.

A. "Hawaiian Officer": Arago (1819)
Ray Jerome Baker Collection, page 41
Bishop Museum Library



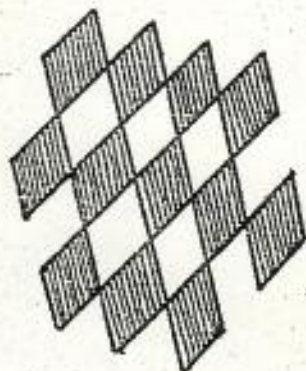
I. right side of
the chest



II. left thigh



III. inside of lower
left leg



IV. center and outside of
the lower left leg

V. the upper right arm has the following tattoo:

TAMAAHMAH
DIED MAY 8 1819

A. "Kalaipahoa": wood figure (aumakua)
found at Hauula, Oahu, 1855.



I. six lizzards: two on the eyebrows, two on the
cheeks, and two on the chin.

In 1919, John Stokes interviewed Lo'e at Honaunau, and Lo'e gave a geneology of the Keawe'ai family. A certain Keawe'ai is described as "tattooed with lizzards, two on the eyebrows, two on the cheeks, and one on the chin." He went on to say that Keawe'ai was sacrificed voluntarily at the dedication of Hale-o-keawe (the Hale-o-keawe was built around 1675, and Hawaiian geneology records show a Keawe'ai, in the Kamehameha line, at about 1650-54).@

@. From the Bishop Museum Ethnographic files.

Sparks, Robert W. Polynesian Tattooing. Honolulu: UH
(graduate thesis); 1965.

Possibly interesting references:

Buck, Peter H. Samoan Material Culture. Honolulu
Bishop Museum Bulletin, 1930

Emory, K.P. "Hawaiian Tattooing", Occasional Papers
of the Bishop Museum vol 18(17) 1946

Faust, David W. The art of Tattooing in Polynesia. Honolulu
U-H (art 287) 1965

Greiner, Ruth H. Polynesian Decorative Designs. Honolulu
Bishop Museum Bul No. VII, 1923.

Mead, Margaret. "Hawaiian Tattooing", Cultural
Stability in Polynesia. NY 1928.

The Kauai tattooing illustrated by Krämer (fig. 6, *c*, *d*), the island of Hawaii tattooing shown by Hedkington (24), and tattooed mummies from caves on Hawaii, reveal some basic uniformity within the group. Cook saw natives of Niuhau with "figures of men badly imitated" tattooed upon their breast (14, vol. 2, p. 216), and Choris, who did not visit Niuhau or Kauai, depicts figures of men crudely done (fig. 3). These human figures are in the style of petroglyphs of human form found throughout the islands.

The data are too scant to allow me to characterize the differences which may have existed in tattooing in the various islands of the Hawaiian group, beyond attributing a prevalence of the dark, half-body tattooing to Maui. However, family styles and the frequent use of certain motifs in one island or district certainly must have existed.

Motifs

The commonest motifs were geometric designs, consisting of straight, wavy, dentated, zigzag, or crossing parallel or diagonal lines; series of triangles; panels of checkerboard design; and stripes of pairs of lines, usually dentated outward. The latter were especially common. Circles were rare, spirals absent. Petroglyphs of animals, birds, and such objects as fans and coconut trees, were fairly common.

Most of the geometric motifs appear in tapa designs and are carved on Hawaiian tapa beaters or on the bamboo tapa stamps. All the motifs in figure 2, which are recorded by Welser, occur as watermark patterns carved on the faces of beaters in Bishop Museum: *a* is on beater 241 (9, fig. 34) and is called *puhi* (twining); *b*, on beater 191 (9, fig. 35), called *ko'ean* (wiggling worms); *c*, on beater 224 (9, fig. 38), called *lei hula* (pandanus wreath); *d*, on beater 9384 (9, pl. 3), modified, called *kapa'i koloa* (duck foot); *e*, on beater 187 (9, fig. 35), modified, and on 2865 and B7018. The motif in figure 2, *c*, but lacking the parallel lines, is on a tapa stamp in Bishop Museum (9, fig. 67, no. 3). The motif in figure 10, *b* is on another stamp in Bishop Museum (9, pl. 9, no. 35). Triangles are usually called *nūho mano* (shark teeth) (9, p. 83). The long line of small birds (fig. 10, *a*) on the numbered arm I have found duplicated on only one piece of tapa, an unnumbered specimen in Bishop Museum. It was stamped around the border with three rows of these birds printed in black and placed

between heavy double red lines. The checkerboard pattern (fig. 10, *d*) is seen on many tapas; one, a malo in Bishop Museum (no. 7777).

Some geometric patterns were used in the ornamentation of stained and fire-etched gourds. The motif in figure 2, *c* is stained on a gourd container (C8728) in Bishop Museum. That in figure 2, *e*, on a stained water gourd in the United States National Museum (no. 3570) and on a pyrograved water gourd in the Peabody Museum at Cambridge (no. 312). The motif in figure 2, *d* is on the bottom of a water gourd (17, pl. 27, *C*; specimen 1254 in Peabody Museum, Cambridge).

Most of the pictograph motifs, such as the human figures and the goats, appear as petroglyphs (20, pl. 9, *I*; figs. 16, 17, 19). The musket and the triangular human figure are etched on a little gourd whistle in Bishop Museum (20, fig. 20).

As such decorated ancient tapa and many old, ornamented gourds (17) have been preserved and hundreds of petroglyphs recorded, an excellent idea of the range and content of Hawaiian decorative design is possible. Although none of the star tattooing patterns mentioned by Cook have been reproduced, we may judge what they were like from the star patterns on tapa (9, pl. 8, 6th from left; plate 9, nos. 2, 4, 5, 24) and on gourds (17, pl. 28, *A* and *E*). When there is doubt as to whether a tattoo motif is pre-European or post-European, the question can be conclusively settled if the design can be found on any decorated object collected from Hawaii during Cook's voyage or during one of the other very early voyages.

The decoration of gourds, other than the tiny gourd whistles, with pyrogravures is not usual. Bishop Museum has no gourd drums, trunks, bottles, or containers decorated by pyrography, but Peabody Museum at Cambridge has a remarkable set of gourds, a drum, a water bottle, a cup, and a whistle, all decorated with pyrogravures. The set was transferred to the museum in 1867 by the Massachusetts Historical Society. The hula drum and the water bottle are ornamented with geometric patterns consisting of straight, wavy, and dotted lines; squares; lozenges; superimposed triangles; lines of adjacent triangles; chevrons; black bands; pairs of triangles placed point to point; parallel arches; concentric circles; and panels of dots and parallel lines. I suspect that the artist was a tattooer, or had at least employed patterns common to tattooing.

The painting, in solid black, of six lizard figures on the face of an ancient Hawaiian image in Bishop Museum (no. 132) probably repre-

Crying, "Oh my grandson!" the old woman carried Kana to her husband. They fed him until his strength returned and then asked him if he had come for the sun. When he replied that such was his errand, they gave him two guides who led the way. They sent a fire in front to show them the way and a wind behind to help them on.

When they reached the line dividing the kingdom from the land of the keepers of the spring, the guides left Kana, telling him to go wherever the wind directed.

So Kana journeyed on alone until he came to the guard, Manu-a, sitting by the king's door. Manu-a was friendly, and, urging the stranger to sit down by him, told him how he had to sit there, and watch the king and his followers eat and play while the cold rain fell upon him.

Kana was greatly interested. Soon he saw how the king got his food. He lifted a stone that covered a large hole in the sky and lowered his hand which was quickly filled with food by the people below.

While the king and his men were eating, the guard said to Kana, "Wait with me until they have finished. Then they will return the dishes and what remains of the food. Prop up the stone with your foot. They will think the hole is closed and will go back to their game. Then we may eat."

Kana did as he was told, and when they were alone he lowered his hand through the hole. As he did so the people saw a large black hand and they knew it was not the king's hand. Someone said, "This hand must belong to a soldier. No wonder it is fat. He sits and plays games all day while we labor for him. Perhaps even now he is demanding more food."

However, Kana's relatives recognized his hand, and filled it with food. Manu-a told him to drop the food. Then his hand was filled with water. This Kana also dropped. They next tried birds which the guard ordered up. These birds called out, "*Kiawe*," the call of the long-legged fish-hawk, and the friends of the king thought that day had come. The king told them that there were no birds there.

Kana again lowered his hand, and it was filled with stars, which he threw into the heavens where they gave light. Then the moon was placed in his hand. Kana put it into the blue sky, where it remained giving light. He was next given all kinds of birds and fowl, and for the first time the rooster broke the morning stillness by crowing.

Yet again Kana lowered his hand through the magic hole in the sky. This time he was given the sun, which he placed in the sky, having received its solemn promise never to disappear again. Since that day no magic power has been able to deprive the people on earth of the great sun.

When the sun rose the king hurried out to see who was interfering with his powers. Kana was about to kill him, but was stopped by the king's promise to bring Niheu to life again.

As soon as Niheu was restored to life, Kana, accompanied by the king, stretched his body and returned to the house of Uli.

This was the king's first visit to this part of his kingdom, and so he planned to visit all parts of it. A canoe made of white chicken feathers carried him from place to place. So he traveled over the world for two years, conquering all lands. At the end of that time he returned to Hawaii and was deeply grieved to hear that the mighty Niheu and the artful Kana had died. He established his kingdom on the island of Hawaii, and collecting worthy ministers, ruled for many years.

KAUAI LEGENDS OF KANA

When Kana came from Oahu, wading through the sea, to Kipukai, Kauai, the turtles were raising up the hill of Hauapu. Kana was afraid that it would reach too high, so he stretched himself up until his body was no larger than a spider's web. When he was tall enough, he put his foot on top of the mountain and crushed it down. So, now, three ridges run out from Hauapu. He found his brother Niheu starving in Kipukai, and so he said he could relieve his brother's hunger. He lay down and stretched his body until his head reached the place where his grandmother was living, on the hills back of Wahiawa. Then he called to his brother to cut his toe, and when Uli fed Kana *poi*, it ran through his body, and reached Kipukai, where Niheu sucked it out. Thus he saved his brother's life.

After Niheu had been fed, Kana found that his grandmother was making tapa, but the sun came up and went down so fast that there was no time for the tapa to dry. So Kana said he could make the days longer. He ordered all the people on the western side of the island to save all the coconut fiber and to braid it into ropes. When plenty of rope had been made, Kana stood on the top of the hill with the ropes coiled near him, and when the sun came up he lassoed it, and broke off some of the spokes. To this day, when the sun comes up, you can see that some of its spokes are shorter than the others, and those are the spokes which Kana broke. The sun then begged him to let it go. Kana said he would if the sun would promise to go slower, so as to make the days longer so that Uli would have time to dry her tapa. The sun agreed, and to this day has kept its promise. So we have to thank Kana for our long days.

for turtles— see also KANA
A Legend of Hawaii
P 93

Hawaiian
AM 101
B 442
no. 3

For Eternal Beauty, Try a Tattoo

By Sid Moody
Associated Press

NEWPORT, R.I.—If your beauty isn't skin deep, there's always Buddy Mott.

If you've got the time, and the money, he'll turn your blank exterior into a Persian rug, a jungle of snarling cats or even a nice sea battle. Take yer cherce.

Buddy's Tattoo Shop is a final vestige of what used to be a perfectly good, disreputable waterfront providing the sailor with gin, women and "MOM" stenciled in magenta on the forearm.

Once there were seven epidermal etchers in Newport. Then, in 1975, the U.S. Navy took the fleet elsewhere. Grog shops became shell shoppes and ice cream parlors. Buddy, nonetheless, survives.

Buddy couldn't care less as he opens his tattoo parlor at 7 p.m. on a recent Monday night. Within minutes there's a waiting line, including several women giggling like they're buying their first bra.

A sign reassures them: "Privacy for the Ladies." Buddy says he puts on dark glasses if his duties take him to restricted areas.

"I started tattooing in '48, '50. I could draw. Probably got it from my mother. She painted. I taught myself. Pinned the instructions on the guy's shirt and went to work. You gotta be able to draw."

A rugby player from Boston University stretches out on three chairs. He wants a screaming eagle clutching a rugby ball right here on his hip.

"Here?"

"Yeah."

"Good. Sun won't hit it and fade it. What's a rugby ball look like?"

"A fat football."

"Got laces?"

"Yeah."

Buddy takes a plastic sheet out of his files and rubs charcoal dust into the inscribed outline of a hopping mad eagle. He presses it to the customer's hip. With a fresh needle—just that, a needle—he begins following the outline with what looks like and sounds like a homemade dentist's drill.

"DON'T move," says Buddy. The rugger is trying to see what's happening to him. His sidekicks from B.U. look on through the window of buddy's cubicle. No privacy for the gents. The ladies are discreetly picking and choosing from a sheet of designs tacked on an opposite wall. One is Buddy's favorite, a clipper ship under full sail. It costs three figures.

"Women have always been tattooed," says Buddy, buzzing away. "Churchill's mother had one, they say. About 10 years ago it became fashionable. They like roses and butterflies. Usually on the back of the shoulder, although I once did a snake on a lady. Elsewhere."

Buddy is filling in the eagle from dabs of red, blue and yellow on a palette, a little

block of wood, a new one for each customer. He finishes up with a fat yellow football in the eagle's grasping talons.

The lad from B.U. now has a screaming eagle just below his waistline. If, on mature consideration, he gives up rugger for basketball, Buddy could alter the ball. He probably can help someone who has changed his allegiance from "Mom" to "Marie" or a mermaid swimming around an anchor. But no erasing. At Buddy's, a card laid is a card played.

He wipes off the eagle with alcohol and puts a bandage on the hip.

"You'll have scabs, like from a rose thorn scratch. Don't pick 'em. Next."

Next has a panther that's been too long in the sun and needs some retouching, especially the yellow. Buddy refers him to his daughter in the next room who's learning the business.

"Next."

It's one of the ladies. True to his word, buddy draws a shade over the window and shuts an accordion door. Buzzzz. Gigggle. Buzzzzzz.

She emerges. Her friends surround her. No, she can't show them HERE.

"Let's go over to my place." They leave, excited.

"Next."

It's a workman in a T-shirt. One arm has already been dedicated to "Roseanne." Now he wants Robert, Eddie and Mikie on the other arm.

"Got the whole forearm. You want sideboards on the names?"

"Yeah."

"Roseanne's kids?"

"Yeah, and mine."

"Need room for a fourth?"

"Naw. Them's IT."

Buzzzzz.

Buddy makes him write out the names to avoid any misspelling.

"Make a mistake and we gotta throw the arm away."

Buddy, 58, chatters as he works. He's got the kind of face, the sidewalk smarts, that could be behind Archie Bunker's bar.

"I guess the weirdest tattoo I ever did was on a guy wanted a ham sandwich on his leg. It was on a 50-buck bet. I asked him did he want it with a bite in it. He said 'yeah.' Tattoo was a \$20 bite out of the 50, too."

Buddy used to double as a sign painter, but now concentrates on the tattoo parlor. "I lock the door at 11 p.m. After 11, you start getting drunks, and I don't need the aggravation. People move too much when they're bombed. If someone rattles the door after 11 and is sober, I'll do it if it's small. But most people who get tattooed are sober. They just like to say they were bombed as an excuse when they get home."



Buddy Mott, a self-taught tattoo artist, applies the everlasting touch. Female customers, he says, are not uncommon.

TATTOOS— LEAVING A MARK ON MANKIND

By Stafford Kiguchi

For centuries tattoos have captured the interest of man. Findings of primitive tattoo needles carved from bone and ancient pigment bowls lead experts to believe the art dates back at least 8,000 years.

Interestingly, the word "tattoo" is derived from a similar Polynesian word of the same meaning—"Tatau." And it was Capt. Cook who brought the word tattoo into the English language. "Ta" in Polynesian means striking or knocking. The ancient Polynesians used a piece of wood to strike a piece of bone which contained the pigment. However, the real technological breakthrough came in 1880 when Samuel O'Reilly of New York invented an electrical tattooing machine.

The earliest forms of tattoos were, not surprisingly, simply surface paintings on the skin. However, the obvious problem with this method was that the coloring would soon wear off. As a solution, two new methods were developed. One involving puncturing the skin with a needle device dipped in pigments while the second method required making scratches in the skin and filling them with color.

According to Webster's Dictionary, "tattoo" means "the art or practice of marking the skin with indelible patterns, pictures or legends by making punctures in it and inserting pigments."

Traditionally, tattoos have been one art form many people in America have found difficult to really appreciate. Dermatologists, in particular, may fall into that category believing it is distasteful to mar the skin in such a way by irrevocably damaging the skin's pristine condition.

However, one dermatologist who has taken a different stance is Dr. Norman Goldstein, M.D., F.A.C.P., an internationally-recognized authority on the subject of tattoos and



Dr. Norman Goldstein

skin cancer. Goldstein, associate clinical professor at the University of Hawaii School of Medicine with a private practice in downtown Honolulu, is the author of **The Skin You Live In** and an upcoming book called **The World of Tattoos**. Goldstein is also noted for having assembled a unique and educational exhibit entitled "The World of Tattoos" which was recently shown on the Mainland. That exhibit is on display until March 4 at the Hawaii Medical Library and will be at the American Urological Association meeting March 5-8 at the Sheraton Waikiki Hotel. From there the display goes on to Belgium and England. Last March his exhibit was awarded the California Medical Association Certificate for the Best Scientific Exhibit.

Tattoos seem to generally elicit a negative image from most of the public and Goldstein hopes his exhibit will open more eyes to see it as a true art



Although colorful and intricate, these tattoos probably remain covered up most of the time.

form. He first became interested in tattoos after treating some patients for a strange sun allergy within their tattoos and has continued with his research.

Goldstein was recently the guest editor for *The Journal of Dermatologic Surgery and Oncology* in which he extensively describes various aspects of tattooing including its history, complications, psychological implications, applications and removal. With permission, portions of the material used for this article come from that November 1979 issue.

The history of tattoos is as interesting as it is diverse. Goldstein points out that ancient statues with tattoos have been found along with tattooed Egyptian mummies. Long ago in Egypt, dancing girls, concubines and female singers were often tattooed with the image of **Bes**,

the goddess who supposedly protected such women.

He adds that in early Greece it's believed men were tattooed as signs of nobility or proof of bravery. But later when that custom died out tattoos were reserved for slaves and criminals.

As unbearable as it may seem in some cultures the women would have tattoos placed on their lips or chins to identify them as married. In certain regions similar tattoos were used to indicate having reached puberty.

Still other cultures believed that a tattoo had special power in protecting women from menstrual discomforts

and would lead them on to a happy afterlife. To some, a fading tattoo meant the onset of blindness so tattoos were immediately freshened when necessary.

In the Micronesian Islands, Goldstein says, tattooing was especially popular among chiefs and important clan leaders. Women were found to have ornamental tattoos on their hands and/or concealed on their genitalia which supposedly acted as a visual aphrodisiac.

A unique tattoo pattern called **Moko** is credited to the Maoris in New Zealand and was used primarily for ornamental purposes on the face. The tattoo also signified marital status for women.

Over the years Japan has become widely recognized for its skills and ornate designs. Goldstein says in early Japan people tattooed themselves for protection against disaster and physical ailments.

There was a period of time, he notes, that tattooing had been abolished but was later reinstated in the 13th century. During the 17th century, criminals were the main subjects of tattoos—the number of

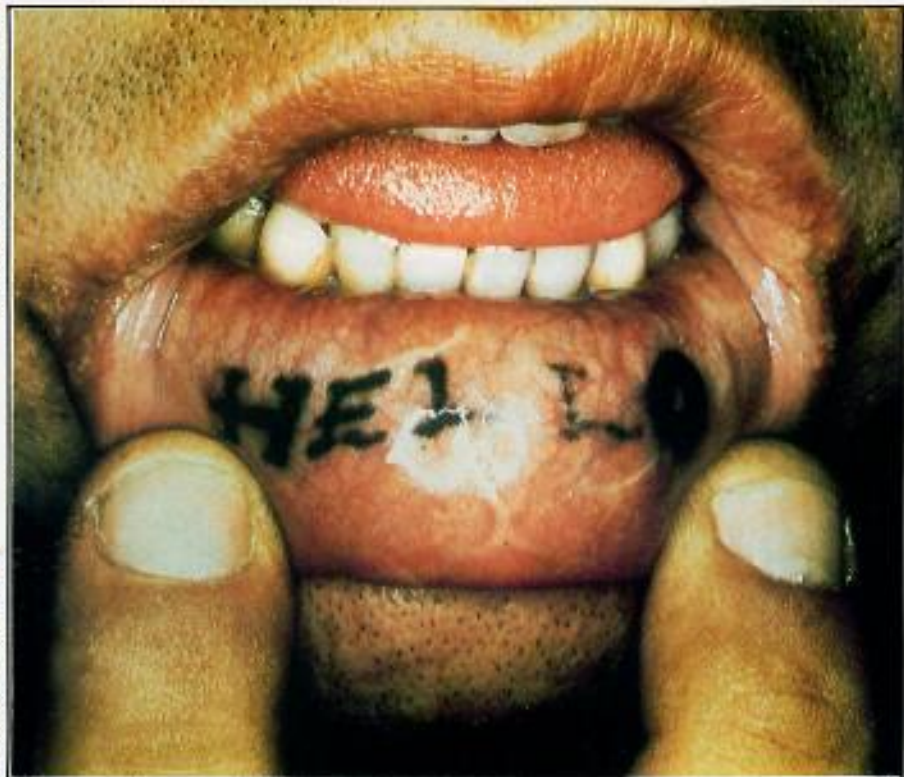
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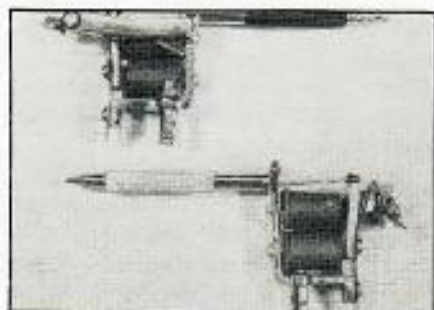
PHOTO COURTESY KAZUO OGURI - JAPAN



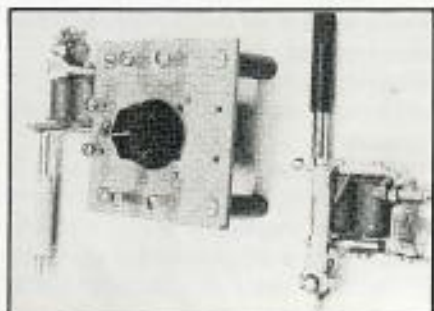
COURTESY KAZUO OGURI - JAPAN



Always ready to say "hello."



Modern electric tattoo machines. The "doorbell" electric magnets move the needles back and forth at a rapid pace.



A speed-control device for the electric tattoo machine (from the collection of "The World of Tattoos").

tattoos reflected the number of convictions. Then in the 18th century tattooing became the "in" thing and contests were staged for best designs. From then on tattooing was considered an art form in Japan.

Samoa, on the other hand, has not witnessed a lot of changes in its tattoo tradition over the years. A multi-pointed shell connected to a wooden stick is still used to tap pigment into the skin. For Samoans, the greater the number of tattoos, the higher the social status. Tattoos are generally found from mid-torso to the knees.

In old Hawaii tattoos were also admired by royalty. Artists who worked on royalty were well paid but the occupation was a risky one. In those days the general rule was that anyone who drew the blood of a noble body would pay for it with death. Although artists were usually exempted while working, that privilege was always revocable. Artistic errors were intolerable.

Reasons For Getting A Tattoo

What motivates someone to wear a tattoo and why do people choose the designs they do? That question has long been a topic of discussion among

psychologists.

As Goldstein points out, obviously not all tattoos, nor all people, are appropriate subjects for deep psychological analysis and implications, but certain studies have revealed some general trends.

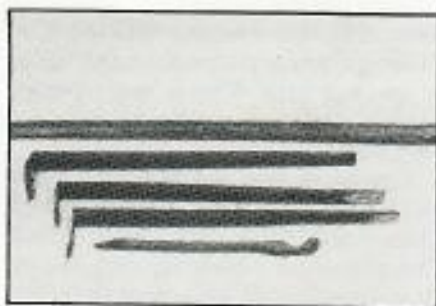
Along with Dr. Shepard Ginades, a psychiatrist, and Sidney Halperin, Ph.D., a psychologist, Goldstein studied a number of tattooed persons at Tripler Army Medical Center. Fifty tattooed psychiatric patients were compared with another 50 psychiatric patients who were not tattooed. Each subject was investigated by psychological testing, questionnaires, and interviews. Family, social and economic factors, the roles of parents, education, attitudes and experiences were recorded and tabulated. Goldstein prefaces the report by saying that "the interpretation of tattoos in military personnel hospitalized for psychiatric reasons cannot and should not be categorically inferred to be that of tattoos in non-military, non-psychiatric persons nor of individuals in other social or cultural environments."

The following table is a tabulation of psychiatric disorder and the prevalence of tattoos on subject:

	Tattooed/Non-tattooed	
Psychosis	5	15
Character disorder	33	18
Sexual perversion	0	4
Alcoholism	4	7
Psychoneurosis	3	7
Occasional		
drunkenness	1	2
Other mental disorders	4	2

The number of tattoos found on the patients ranged from one to 11 and above. According to the study, it was found that possessing only one tattoo had little relationship to a psychiatric diagnosis. However, persons with a second tattoo were much more likely to have a character disorder.

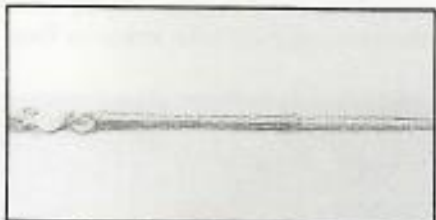
First understanding that the 50 patients represent a special segment of the tattooed population, Goldstein further points out that the study indicates the tattooed patients to be "basically immature, sexually ambivalent (tendency to homosexuality or homosexual and heterosexual interests), emotionally



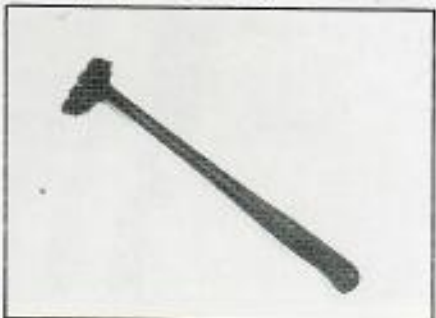
Samoaan tattoo instruments.



Two-piece Burmese tattoo instruments (courtesy of Pearl Steele).



The tattoo needle and handle (from the Bishop Museum).



An ancient Hawaiian MOLI tattoo needle (MOLI also means albatross in the Hawaiian language) made by splitting an albatross' leg bone, and grooving it. The two halves are then tied together and attached to a wooden stick in the adjacent photo.



gone so far as to have photos of their pets tattooed on their own skins.

At one time or another it crosses everybody's mind who gets a tattoo, "what do I do if I don't want it any longer?" Dr. Goldstein points out that "there is no method of removing imbedded pigments of tattoos that restores the skin to its original, normal state. The pigments used in modern times are so biologically inert that no natural metabolic mechanism or artificial means solubilizes readily and removes them cleanly and without damage to their site of placement. Even the most reasonable and practicable of methods may result in more or less scarring."

Goldstein says today the most satisfactory method of removal is dermabrasion which essentially means scraping off the skin. But he reminds that even through this abrading technique there is still evidence of a scar. However, with dermabrasion the patient generally does not require second treatments and there is no need for stitch removal. Depending on where the removal is performed and how deep the tattoo is the cost may range anywhere from \$50 to \$200 . . . a might steeper than the cost to have it put in. ★





Tattoo being removed by the "French Method." Part of the tattoo has been scraped off. An acid is now being applied.



Dermabrasion or "sanding" of a tattoo.



After dermabrasion, a caustic silver nitrate is applied to form a thick black scab. It peels in a few weeks. Surgery performed by Dr. James Penoff, M.D.

labile and lacking in frustration tolerance. The person tends to act out hostile, aggressive and infantile impulses with no regard for others against a background of impaired relationships to parental figures. Intelligence was generally well within the normal range.

Other findings were that 35 of the 50 said they would not be tattooed again and all those with and without tattoos felt that a man who gets a tattoo is usually an "ordinary guy."

According to another non-related study, motives for tattooing were shown to be ornamentation, exotic meanings, signs of courage, initiation into adulthood, magico-religious symbolism and establishment of an

"identity." It was found that the people who generally wore tattoos were military personnel, juvenile gang members, prostitutes, cowboys, miners, loggers and persons who landed in prisons.

It was also found that a surprising number of women bear tattoos. Intimate tattoos are generally concealed but many women are proud to display a butterfly, flower or tiny bee on a shoulder, breast or ankle.

In 1977, a plastic surgeon by the name of **Joseph Agris** studied over 200 women at a coeducational correctional facility in California and discovered that more than one-third of them had at least one tattoo. The average number was five.

Agris saw the women, again, generally preferred soft, dainty designs like birds, flowers, butterflies and hearts. Also popular were zodiacal signs, initials and nicknames of boyfriends or husbands.

One study conducted in 1955 on the significance of tattoos concluded that tattoos in multiplicity were characteristic of schizophrenics. It was also reported that schizophrenics usually went to a tattoo parlor alone rather than in a group. That same study showed, too, that a rose tattoo was often associated with alcoholism.

Goldstein added that male homosexuals frequently have tattoos on their buttocks. Some may be as trite as just a name of a friend and lover, flowers, lips, but some can get quite elaborate.

In discussing reasons for tattooing, Goldstein makes one final observation and that concerning tattoo artists who are tattooed. For them, he believes, being tattooed serves more as a means of advertising their vocation—they are like a walking billboard.

In addition to the reasons already discussed for having tattoos, there have been some other occasions where people have used tattoo pigments to fill in the spaces between the sites of hair transplants. Tattoos have also been used to disguise scars in eyebrows and bearded areas. And the tattooing of red pigment into cheeks as a permanent rouge and into lips as lipstick has also been accomplished.

Other applications can be found in



Tattooed eyebrows of a 21-year-old woman.



The tattooed eyebrow is cut out and has been placed above for photographic purposes.



The edges of the surgery site are kept together with "Steri Strip" tape.



The tattooed eyebrows have been removed and natural eyebrows are beginning to regrow. Surgery performed by Dr. Robert Schultz, M.D.

tattooing valuable animals such as dogs and horses with the owner's social security number. It's been said that some real animal lovers have

turn to page 38

PETE STEPHENS A TATTOOIST WHO GETS RIGHT TO THE POINT

By Stafford Kiguchi

On Smith Street just off Hotel Street in downtown Honolulu is a small inconspicuous yellow building worn with age and displaying a modest sign out over the sidewalk reading **China Sea Tattoo Co.**

Although having been there for years the shop remains a mystery to many—just another place to add to the offbeat color of downtown. But for others it's a place where dreams are met and where, for some, a new purpose in life is gained.

Perhaps a bit overstated, but there's no denying the importance that tattoos play in many people's lives. **Pete Stephens** knows. As owner and artist of China Sea Tattoo he's seen and heard just about everything when it comes to tattoos. A native of New York, he's been at China Sea for only a little over a year but has been in the tattoo business professionally for the past decade.

From an architectural standpoint his shop is nothing too spectacular and probably will never capture any design awards but it is tidy and functional. Void of any furniture to speak of in the reception area with the exception of two benchlike seats the room primarily serves those who wish to gaze at some colorful tattoo designs orderly arranged on the walls.

Stephens, who is a lively man and obviously well-versed in his art, works in a small back office. He's an outgoing guy who loves to talk about his work when he's not tattooing.

Admittedly a rather unique and specialized line of work, he got his start in the business as a hobby when he sent away one dollar for an illustrated booklet on "tattooing in your spare time" from **Popular**



Tattoo artist Pete Stephens says he loves his work which gives him an outlet for his creative energies.

Stephens: "I like the work. I enjoy the challenge of it because I only get one chance. It's also very flattering that somebody's going to like your work enough to wear it on their body always."

Mechanics. That was in 1964.

"But I didn't follow up until years later when I got out of the Marine Corps in 1968," he says. He jokingly quips, "There was also a mail order correspondence course that I imagine would be comparable to learning brain

surgery by mail." But at \$300 for all the necessary supplies he found himself procrastinating.

It wasn't until a couple years later he received a healthy tax return from Uncle Sam and as he put it, "for once in my life I didn't need the money for anything. So I said, all right, I've been looking to do this for years so I'm going to finally do it."

To his surprise nobody needled him about his aspirations and instead he found customers lining up even before he was ready to go. "I had just mentioned to people I was going to be getting into tattooing," he says recalling his surprise to the immediate response.

At the time he was working in a family-owned restaurant in New York but complains, "I didn't really care for that line of work, I couldn't express myself. You can only build a sandwich so good . . ."

All modesty aside, Stephens became quite good at what he did and decided to turn his hobby into a career. In 1970 he opened his own shop in New York and fared well for about three years teaching himself new techniques and designs as he went along.

"The book on tattooing can only give you basics," he says. But being a fairly good artist he found little trouble in picking it up. "It was just getting used to the medium I was working with."

From New York he moved to California where he stayed for six years before finally coming to Hawaii. He bought the China Sea from Mike Malone, who wanted to sell it so he could travel.

TURN to page 32



SAILOR JERRY COLLINS COLLECTION

Circa 1918 — A full body tattoo by Charles Wagner.



Perhaps a sign of the times, more and more women are getting tattooed. Some of the designs go beyond the ordinary butterfly or heart.



SAILOR JERRY COLLINS COLLECTION

Tattoos of earlier days seemed to accentuate the natural body lines more so than today.

"It really feeds our ego a lot. Wearing a tattoo is an ego trip and being a tattoo artist is a much bigger one."

According to Stephens, business is pretty good, attracting people from all walks of life but mainly the military servicemen. "This just happens to be a servicemen's location," he says referring to his downtown shop, "(but) I've worked on ladies, disc jockeys, lots of different people. Did you know that **Winston Churchill's** mother was tattooed? Had a snake bracelet around her wrist."

On an average he figures he does better than 100 tattoos a month. He charges \$60 an hour and says that usually the simple and more common designs take between 15 minutes and a half hour to complete.

One of the trickiest parts of his job is trying to interpret what people visualize in their minds. To prevent against any "surprises" Stephens generally sketches out complicated ideas on paper first. "Either we get it right or we both end up getting tired and forget about it," he smiles. For common designs he uses a template to lay down an outline. From there he can just fill in the colors. The inks used are a chemical-based, non-toxic permanent pigment ink.

The tattooing machine itself is a simple hand-held device powered by a small rheostat. A shaft contains the needle which moves something like a sewing machine needle. The needle is dipped into the ink and the ink is dispersed similar to a fountain pen. The needle penetrates about the thickness of a dime into the skin and is not that painful, he says.

Tattooed himself heavily over the arms, Stephens points out that everyone has his or her own inner reasons for wanting a tattoo.

"People need to fulfill their own needs," he explains. "A lot of the reasons are negative if you really think about them. People like to form identities where they never had any before. And depending on what they get they can put themselves into a certain classification of people. That's why it's very big in the service. They want to be accepted. Same thing with motorcycle groups. But I know a lot of people in motorcycle clubs who aren't tattooed. But again, there are people who are not in motorcycle groups but



The incredible and inimitable Prince Dracula.

wear motorcycle-type tattoos because they want to be associated with that group of people."

He feels that people sometimes draw strength from their tattoos. "Something may be missing in their characters and this is an outlet. Who knows, perhaps we're dealing in a bigger service than we realize. For example, if a man is a little disturbed or

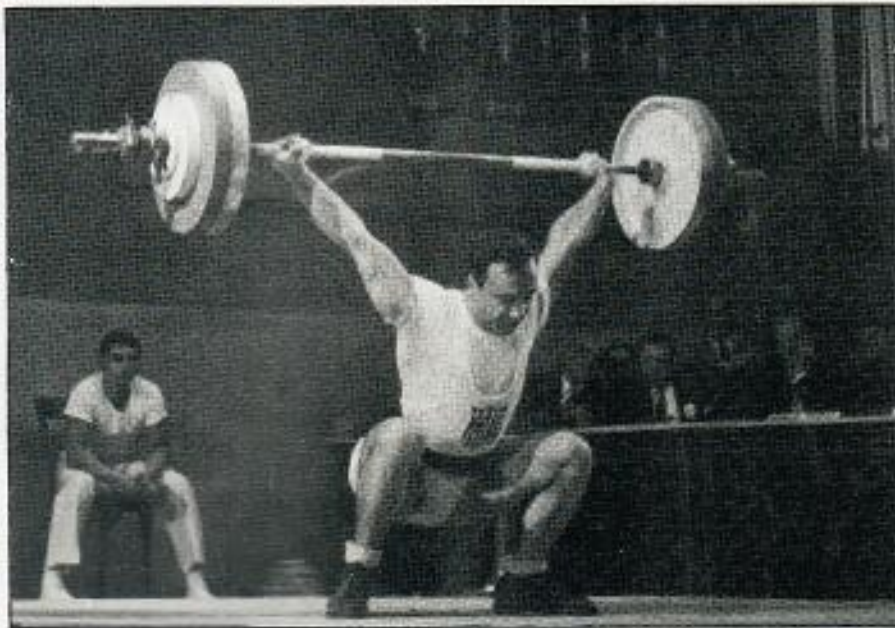
is potentially dangerous, maybe through tattooing he can blow off a little bit of steam. I don't know, I'm not trying to glorify my position as a professional tattooist.

"I like the work. I enjoy the challenge of it because I only get one chance. That's very demanding. It's also very flattering that somebody's going to like your work enough to

SAILOR JERRY COLLINS COLLECTION



At the World Championships in Milan — 1951.



Dr. George serves on the executive committee of AAU weightlifting and is an official on the U.S. weightlifting committee.



Being a former member of the U.S. Olympic team Dr. George understands the grueling pain that can accompany top-notch competition.



In 1952 Dr. George won a gold medal for weightlifting at the Olympics in Helsinki.

Unfortunately the U.S. team is not afforded the benefits of such a program and must also fulfill job and/or scholastic obligations. "It's not a vocation with our boys," George notes, "it's an avocation."

George says when he asked one of the Russian coaches about their training program he had no qualms about offering information. They were very helpful he recalls and says he was told, "I'll give you all the background and help I can because at this point it looks like you (U.S.) people aren't trying and we don't like to win by such big margins."

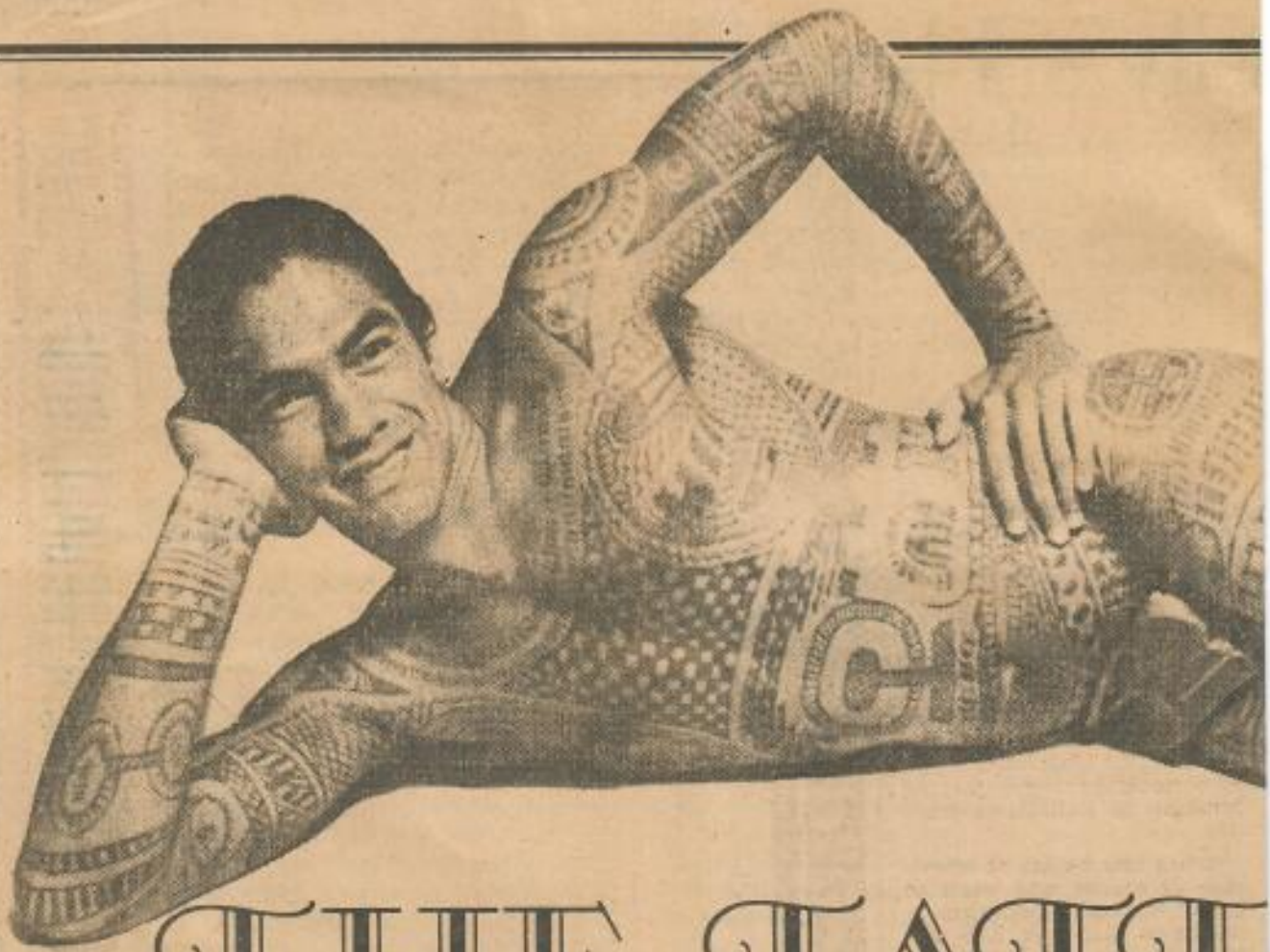
"In the morning we train on speed and timing, in the afternoon we work mostly on our form and in the evenings we work mostly on strength."

At the moment the U.S. weightlifting hopeful, according to George, appears to be a San Franciscan by the name of **Mark Cameron**.

He wishes the United States could provide more training camps for its athletes but that takes money, a lot of money. Unlike the Russians, the U.S. is dependent upon voluntary contributions.

Bert Thomas, vice president of marketing for Aloha Airlines, is spearheading the fund-raising effort in Hawaii. Donations from all sectors of the community are helpful, George assures, but they are also looking for support from corporations. For instance **MACK Trucks** has become the official national sponsor for the weightlifting team.

Hawaii residents and businesses may send their contributions to the **U.S. Olympic Fund, c/o Bert Thomas, 1077 Bishop St., Suite 430, Honolulu, Hawaii 96813. ★**



THE TATT

Star-Bulletin
Today

Features
Entertainment

Section
B

Honolulu
Tuesday, April 20, 1982



OOIED MAN

His Highness Afloga, High Chief Matagiialua Tavana, was plenty worried.

"A couple of times, I could see Teve's face turning gray," said Tavana, the 49-year-old impresario of "Tavana's," a Polynesian nightclub in Waikiki. "If he died, I'm the one who gets the blame, right?"

The object of his fatherly concern was 21-year-old Ioteve Tuhipua Puhetini, a dancer in the Tavana show. Teve is a native of Nukuiva in the Marquesa Islands who gravitated from his homeland to Tahiti and finally to a spot in both Tavana's show and his extended family of Polynesians.

In August of 1981, Tavana accompanied Teve to Samoa, where he was tattooed—neck to ankles, including armpits, groin, even his bottom—in the ancient Marquesan Islands style, which uses, instead of the modern electrically powered tattooing instrument, a series of sharp mallets made from bones and tapping instruments.

Normally, the pain involved in any modern, full-body tattoo is endured piecemeal over a long period—say, two to six years—but Teve would undergo the old-world ritual in just six weeks, being hammered daily from 8 in the morning until 1 in the afternoon.

In addition to the continual, steady pain, a massive tattoo of this kind raises the threat of all sorts of medical complications: swelling, infection, hepatitis, impetigo, even blood-pressure failure caused by the shock of it all. There are those who thought the six-week ordeal might

kill Teve.

Tavana, who for years ran a Polynesian spectacular at the Moana Hotel before moving to his own nightclub in the International Marketplace, swears the body tattoo was Teve's idea, not his. In Polynesian cultures, Tavana says, the body tattoo is seen not as the hallmark of a drunken sailor, but as an ultimate display of courage, the lifelong mark of a brave warrior. Besides, as Teve proudly says today, it's beautiful.

"My competitors," as Tavana describes the owners of other Polynesian shows on Oahu, "told people that I *made* Teve get the tattoo. That's ridiculous! He's part of my family. He begged me. Among his people, it is a great honor. In fact, when the body tattoo was finished, he wanted to do (tattoo) his face and hands too, but I refused. I thought that was going too far."

Tavana knew that the last body tattoo done in the Marquesan style was performed more than a century ago before the missionaries banned the ritual practice. To guarantee authenticity of the design, Tavana needed to locate illustrations of ancient Marquesan tattoos. That search, oddly enough, led to Germany, where the most thorough research on the subject has been done. Having acquired reproductions of the ancient tattoos, Tavana and Teve flew to Western Samoa and located an expert tattooist, a *tufuga*, named Lesa Li'o Tusi.

Tavana brought with him life-size pictures of Marquesan tattoos, and the *tufuga* studied them for four

By Steve Spence, Star-Bulletin Writer

weeks before the marathon began in August 1981.

Perhaps to prove that he was not a Fagin leading young Teve astray, and also that he believes strongly in keeping alive the old Polynesian ways, Tavana made the ultimate gesture: he had himself tattooed too, in his native Tahitian style. "I did it to infuriate my competitors in Hawaii," he said, grinning. "I know they would never go this far to be authentic."

During the tattooing, Teve lost 15 pounds and Tavana dropped 20. Teve's legs and arms did swell up briefly, and indeed he turned gray a few times, but Tavana brought with him a large supply of penicillin

tablets and an antibiotic salve he applied to their tattoos.

"Teve didn't get any infection. I fed him the best food—steaks and salads. Sometimes we had to soak him in ice water because he was going into fever. He went through a lot of pain," which was calmed by constant massaging of the temples and verbal encouragement. As word of the marathon tattooing spread, chiefs in the area came to watch, perhaps wondering how Teve could possibly survive the ordeal.

"The flies are what can kill you," says Tavana, explaining that the work was performed in an open-air Samoan house. "I never let them near me. I had people fanning them away," he said.

Teve speaks little English, but when asked how severe the pain was, he replied by rolling his eyes in the back of his head. You get the point.

He indeed seems extraordinarily proud of his tattoos, which have an Egyptian look about them. No regrets, he says, shaking his head aggressively when asked if they've caused him any social grief.

Tavana interjects: "You should see the reception you get from the people there—you're like a movie star. People tattooed like this are called *sogaimiti*, and they were the people who sold food to the kings. In the Marquesas, they're seen as fierce warriors."

Tavana was asked how the tattoos are received here in Hawaii. "Here, they think you're nuts. But I consider the source. And these tattoos, they're not eagles and tigers and flowers and hearts with 'Mom' and other bull. You should see the feeling of the chiefs there. They were so impressed with Teve they made him a *matefilli*, which means the same as a prophet." Hearing this, Teve glows and extends his left foot, which bears the title in a tattoo.

"Also," Tavana says, "it cost me \$35,000. Not just for the tattooing, but the airfares, the hotel suites, and all the expenses a high chief pays for along the way. It's not the money anyway—it's the incredible feeling that comes from the chiefs, the people." Teve beams again.

And, Tavana adds, "There's a lesson here too. It's a lot harder to be authentic than to be a liar."

Matagiatalua Tavana with dancer Ioteve Tuhipua Puhetini. Both men underwent extensive body tattooing in Samoa last year.—Star-Bulletin photos by John Titchen.



Tattoos Making Their

PRESCOTT, Ariz. (AP)—"I am an artist," says Clutch Massengale, "and I require a perfectly still canvas." A little hard to obtain, perhaps, when the "canvas" is a human body. Mark Massengale of Prescott—or Clutch as he prefers to be known—is a tattoo artist. He finds that, contrary to traditional belief, his work is in greater demand by women these days than by men.

"People from all walks of life come in here for tattoos," he said in a recent interview in his shop. "Secretaries, laborers, construction workers, lawyers, nurses, housewives—it's no longer restricted to military people.

"Over 50 percent of my customers are women," Clutch added. "They usually start with a small tattoo—such as a rose—and often return for a more elaborate or original design."

Where tattoos are placed is a matter of some interest to nontattooists. Women, he said, prefer their shoulders above all other skin areas. There is also a big demand



for embellishing less public areas, to paraphrase Clutch.

"They use a shoulder tattoo as they would a piece of jewelry," he said. "Depending on the clothing, it can be completely covered or exposed. It's different for men. They

want something that will be seen, so they usually start with their arms."

SINCE WOMEN are notorious for changing their fashion minds, why would they opt for non-removable jewelry?

"The designs are often original, either their own or worked out with me," said Clutch, "and no two tattoos are applied exactly alike. They

The Sunday Star-Bulletin & Advertiser Honolulu, December 7, 1980 C-5

Mark on More Women

are really works of art that stand the test of time.

"It's the use of color, detail work and subtle shadings that make tattooing a work of art," he said, "and that's what makes each artist's work unique.

"This isn't a trade you learn in school," he added. "It's passed on from teacher to student. The man who did the tattoo on my back was my teacher.

"Each year there is a convention that is attended by tattoo artists from all over the world. That's where I hear about the new inks, new sterilizing techniques, as well as the display of work by the great artists."

Although the inks are modified from year to year, the basic ingredient is still "pure India ink," he said.

The tattoos are applied with an

electric tattoo gun which is operated by a foot pedal. The gun needle travels thousands of times per second back and forth on a person's skin.

"There are eight layers of skin," he explained. "The needle is adjusted so it will travel through three of those layers—and it isn't painful. It feels like a sunburn and the minute I stop the gun, the sunburn stops."

Tattoo exhibit slated

The World of Tattoos, a scientific, artistic and cultural exhibit will be presented Jan. 21-Feb. 29 at the Hawaii Medical Library, on the grounds of Queen's Medical Center by Dr. Norman Goldstein, a Honolulu dermatologist and clinical professor of dermatology at the University of Hawaii Medical School.

The exhibit includes a collection of photographs showing common and unusual, exotic and erotic tattoos collected by dermatologists, plastic surgeons and others around the world.

There also will be on view an unusual collection of tattooing instruments, primitive and modern. Included will be modern electrical instruments, Samoan tattoo equipment and 700-year-old Hawaiian tattoo needles, as well as a mummified tattooed arm from the Bishop Museum.

Psychological implications and medical complications which may result in persons who have been tattooed will also be presented. Sun allergies affecting persons with red tattoos will be shown and modern medical applications of tattooing, including cosmetic coverage of scars, tattooing of "collie nose" (a precancerous condition of dogs' noses) and a tattoo technique to improve hair transplants are also included.

After its showing at the Medical Library, the tattoo exhibit will be on view March 5-8 at the American Urological Association conference at the Sheraton-Waikiki Hotel. Goldstein is the author of a book, "The Skin You Live In." The exhibit has won awards during the past year from the California Medical Association and the International Society of Tropical Dermatology.

MAHALO TO THE FOLLOWING INDIVIDUALS FOR THEIR PHOTOGRAPHS, TATTOO EQUIPMENT, REPRINTS, ADVICE & PERMISSION TO USE THEIR TATTOOS IN "THE WORLD OF TATTOOS."

Ackerman, Bernard	Halberst, Sidney
Ackerman, Milton	Hay-Roe, Victor
Agita, Joseph	Herrmann, W. P.
Aigens, Norman	Henderson, Rachel
Andrade, Rafael	Holmes, John
Arnelagos, George J.	Holzer, Karl
Arnold, Harry J.	Howell, Burt
Ascoe-Hansen, Gustav	Huntley, David
Bacon, George	Jamovich, Leon
Baker, Rudolf L.	Jainock, J. E.
Baron, Robert L.	Kahn, David
Baseman, Herman	Kish, Neville
Beigfeld, Wilma	Koerber, Walter
Biau, Saul	Kopf, Alfred W.
Blutbarb, Samuel	Kuwada, Kay
Brauer, Ernie W.	Larot, Paul
Brenson, Leo	Lessenden, C. M., Jr.
Brodhagen, Hågar	Levan, Norman
Broder, E. A.	Levy, Jerome
Brownstein, Martin	Lewis, S. W. (Bill)
Bullenworth, Thomas	Lincolt, Charles
Castaway, J. Lamar	La Buona, Philo
Canizares, Orlando	Laetke, E. Dorinda
Caplan, Richard	Maceos, Alisan
Casper, Peter J.	McGeary, Noel
Catley, Roger I.	McKarrin, Stacy
Chisman, Bruce	Mehregan, Amir
Chopkara, Vincent	Merr, Henry
Clabaugh, West	Meyer, Giles
Cole, Larry W.	Miller, Timothy
Comares, John	Milakin, Howard
Conna, George	Michael, Wendy
Daniel, Fittington, J.	Montes, Leopoldo
Davis, Richard G.	Mooserjee, Manas
Dickinson, John	Muller, George
Dobson, Roberto	Murakami, Carole
Dobson, Richard	Nabab, Hassan
Emory, Kenneth P.	Nakano, Masao
Epslein, Irvin	Nakabay, Dori
Fink, Eugene	Nelson, Lawrence
Fink, Robert M.	Niyama, Hideo
Fisher, Alexander	Obermayer, Maximilian
Fisher, Benjamin	Odum, Richard
Fischmader, Rolf	Ogihara, Rosemary
Gatin, Gerry	Ohno, Professor
Gibbs, Richard	Oliver, Raymond
Grundes, Shepard	Orukawa, Mba
Goldman, Leon	Orta, Leo
Grupper, Charles	Padilla-Gonzalez, Antor

A SPECIAL MAHALO TO:

RICHARD CLARK, GARDEN GROVE, CAL
Exhibit Designer

MICHAEL CLARK, B.P.A., HONOLULU
Photographer

DALE TANIYAMA, HONOLULU
Special Assistant, and

RAMSAY, HONOLULU
PEN & INK MASTER ARTIST

THE WORLD OF TATTOOS



HAWAIIAN OFFICER 1819 BISHOP MUSEUM, HONOLULU

A Scientific, Artistic and Cultural Exhibit

By
Norman Goldstein,
M.D., F.A.C.P.
Honolulu, Hawaii



THE WORLD OF TATTOOS . . .

Tattoos have interested physicians and artists for many centuries. In fact, most people are fascinated by the sight of "Living Art." Stimulated by the discovery of unusual allergic reactions, Dr. Goldstein began a serious study of the aspects of tattoos twenty years ago. He reviewed the medical, ethnic and art literature on tattoos, and with the help of many friends from around the world, collected more than 7,000 tattoo photographs.



A SUN
ALLERGY IN A
RED TATTOO



DR. GOLDSTEIN
& LYLE TUTTLE,
SAN FRANCISCO
TATTOO ARTIST
PLANNING
EXHIBIT



THE WORLD OF TATTOOS EXHIBIT

Premiered at the American Academy of Dermatology meeting in San Francisco in December, 1978, it has also been presented in Los Angeles, Toronto, New Orleans and Honolulu. The exhibit has also been invited to Paris, Brussels, Tokyo and London, where it will be presented at The British Association of Dermatology.

The exhibit was designed by Richard Clark, of National Design Concepts, and constructed in Buffalo by Designs for Industry. The Research and Education Foundation of the Honolulu Medical Group, as well as other organizations, have offered assistance.

AWARDS RECEIVED BY THE EXHIBIT



additional tattoo information
and publications . . .

TATTOO CARTOONS

A collection of 30 favorites
by Norman Algiers

SPECIAL ISSUE ON TATTOOS

An entire issue of "The
Journal of Dermatologic
Surgery & Oncology"
dedicated to tattoos. *Nov 1979*
Edited by Norman Goldstein, M.D.

TATTOO REMOVAL TECHNIQUES

A video-tape describing the
various medical and surgical
methods for tattoo removal.

THE WORLD OF TATTOOS AN ART ANTHOLOGY

A compendium of selected
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*The Zee Studios
2220 Rockford Ill. (906)*

*Zee School of Tattooing
728 Leslie Ave
Rockford, Ill Zip? -*

*Lyle Tuttle -
San Francisco Tattoo Artist
+ Museum of Tattooing*

*Huckleberry Tompkins Co
30 East 42nd St
NY NY 10017
(The Temporary Tattoo)*



SAILOR JERRY COLLINS COLLECTION

Circa 1923 — Tattoo by Prof. Charles Wagner.



SAILOR JERRY COLLINS COLLECTION

Tattoo work by Red Gibbons. Artoria — 1923 from Ringling Bros. Shows.

“People need to fulfill their own needs . . . People like to form identities where they never had any before.”

wear it on their body always. It really feeds our ego a lot. Wearing a tattoo is an ego trip and being a tattoo artist is a much bigger one.”

According to Stephens the more ornate Japanese-style tattoo designs are becoming increasingly popular. He explains that when the Japanese had tattoos applied “everything (they) had tattooed on them had meaning to it as opposed to the westerner like myself who might look like we were rolled around in a barrel of tattoos and

whatever stuck, that’s what you had.” He adds that in ancient days the people had great design concept and used the tattoos to accentuate their natural body lines. It looked better than having just one here and one there.

However, unlike in the past, today there is a lot less risk of infection from getting a tattoo. Stephens says that in Hawaii the health department is very strict on hygiene practice. There are five licensed tattooists in the state, he

notes, and they all have to meet the state’s health codes.

He warns that tattoos, like any kind of cut, scrape or open wound is subject to infection if not properly cared for. Immediately after tattooing the area is treated with an antibiotic and wrapped in a sterile gauze. Stephens recommends leaving it on for at least 24 hours followed up with soap and water washings. The tattoo should scab and heal within four to five days. ★

PACIFIC ISLANDS MONTH OCTOBER 1971

P I N N

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THE FALL AND
RISE OF THE
ISLAND TATTOO

LIBRARY OF
GEORGE H. BALAZS

THE FALL AND RISE OF THE ISLAND TATTOO

Custom-tattooing, a traditional art, tribal symbol or merely as decoration, has been practised for centuries. In the Samoas, where tattooing is a status symbol, the art lives on. Leulu Felisu'ua describes the 'pattern'. But in the Carolines, says the Curator of the Tattoo Art Museum, San Francisco, Leo Breerton, only one small group of tattooists remains.

In Carolines it's a dying tradition

Time is running out on Fais in the Western Carolines for one of the last visual links with Micronesia's past, the art of tattooing. Young people, set adrift in a cultural sea of transition, are no longer being tattooed, and only a handful of old, traditionally-tattooed people remain.

Once, the practice was commonplace among most of the Pacific Islands with the Maoris of New Zealand being, perhaps, the most well-known for their beautiful *Moko* or facial tattoos. Today, Samoans are among the few who continue to practise the art as they did in the past.

Early Pacific explorers played an important role in the story of tattooing. Spanish journals referring to "painted" natives are common, but it was Captain Cook who, in the mid-18th century, introduced the Polynesian word *Tatau* to the Western world.

In Europe, where tattooing hadn't been practised for centuries, the ensuing exhibition of tattooed natives as well as sailors, who had been tattooed during their travels, rekindled fervent interest in the art, and explorers were soon followed by traders, colonists and missionaries, the last named probably finding tattoos and the ceremonies accompanying

their application the very zenith of paganism.

The interaction of one cultural set of values with another is today, as in the past, running its course throughout the Islands. The areas of Micronesia that did not fall on the trade routes had little direct outside influence, and it is on these islands where one can expect to see traditional art forms surviving. Fais, which lies south-east of Ulithi Atoll in Yap District, is just such a place.

I spent a few weeks on Fais documenting through photographs and interviews the state of the art as it exists today. The old chief, a former tattoo artist himself, explained the traditions which dictated the appropriate age, the designs used, as well as the parts of the body to be tattooed.

From the mid-thigh up to the neck the men are covered front and back with geometric designs, each having a special name and significance. Unlike other areas of Oceania, where a full set of tattoos might be started at an early age, here the work wouldn't begin until the man's body had reached maturity. Changes in muscle tone or weight could adversely affect the line quality of the design.

The women were tattooed primarily on the legs from knee to ankle and on the arms from elbow to wrist. This work was done by the male artist. However, the lovers' tattoos, which were worn under the lava lavas, were done by females.

The techniques involved were simple, but the artist had to be highly skilled since one cannot erase mistakes. A sharp-edged tool coated with the pigment, a mixture of soot and water, was tapped by a wooden striker making the design permanent. The process was lengthy and dangerous, the risk of infection high. This factor, along with the subject's ability

to endure pain, determined the pace.

In addition, the operation was costly with payment usually in the form of lava lavas, pigs or money.

What with the pain and the cost, one begins to wonder about the motivations involved. In addition to showing social rank or military prowess, traditional tattoos have always fulfilled one of man's more basic needs, that of decorating his body.

The disappearance of tattooing and other traditional art forms are the reflection of a change in cultural, religious and political attitudes. And these factors are instruments in the hands of the one thing which changes us all, time.

But Samoans still do their thing

Samoans take their tattooing seriously. It's not merely a matter of adornment for the body. It is in essence a status symbol. Traditionally, it is the Samoan form of initiation into adulthood. If a young man did not have *pe'a* (tattoo), he was not worthy to serve the matai (chiefs). And chiefs who did not have a *tatau* (chiefly name for tattoo) were often ridiculed. Traditionally, that has been the case. Even today, it is largely true.

The first man to have a tattoo in Samoa was Tuiavana Tamaalelagi, one of the most important personalities in the history of Samoa. It is said that when his tattoo was completed, the event was celebrated for many weeks, and the most beautiful virgins from all parts of Samoa came to Tamaalelagi's house to see the tattoo and to offer proposals of marriage.

It is not surprising, therefore, that Tamaalelagi came to be one of the most married chiefs in Samoa. His last wife, a Tongan, bore him Salamasina, who eventually became Queen of all Samoa. Her reign was the most peaceful and productive in Samoan history.

According to Samoan legend, tattooing was originally



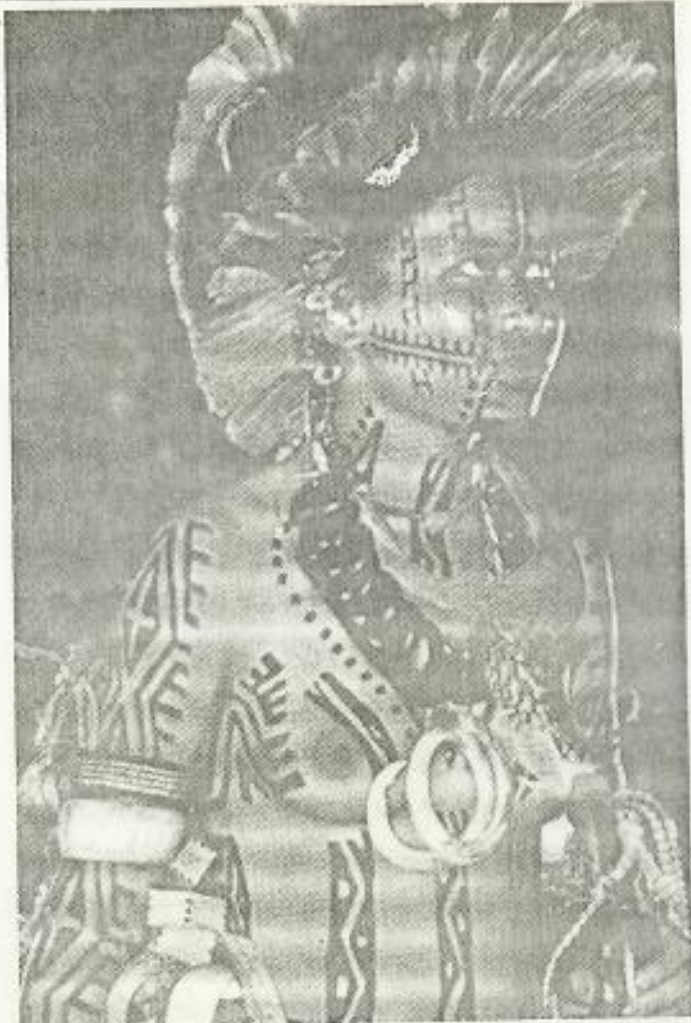
A Caroline Islander with body tattoo ... the art is all but dead

imported from the Fiji Islands. Apparently, in ancient times, as today, many Samoans used to visit Fiji. A couple of Samoan women were among these visitors. They were impressed with the Fijian custom of tattooing for the women. They decided that they would transplant this custom to Samoa. So they swam all the way from Fiji to Samoa.

During their swim, they sang to remind themselves of the details of the tattooing custom in Fiji.

The song went something like this: "Women alone are tattooed, but not men." When they neared Samoa, perhaps because of the cold and the strain of the journey, they forgot the original words of the song and began to sing: "Only men are tattooed, but not women." So that is why, today, only men are tattooed and not women.

The craft of tattooing requires exceptional skill on the part of the *tufuga* (tattooist). As a craft, it tends to be handed on from father to son — the secrets are jealously guarded. And *tufuga* in general are people of high status in the community — they enjoy the same status as house-



Papua New Guinean with simulated tattoos . . . when the festivities are over, the 'tattoo' will be washed off.

builders, also called tufuga. And they also receive generous rewards for their efforts. Many such tufuga still exist in Samoa, one of the most famous of whom is Faafetai of Manono.

When the London Missionary Society missionaries came in the 1830s, they tried to stop tattooing. They were against it because it involved the shedding of blood.

On the other hand, the Roman Catholics were not against tattooing, seeing in it just a peculiar custom. Perhaps, largely because the various religious denominations in Samoa are not agreed as to the correct theological policy towards tattooing, it is still as popular as ever in Samoa. Even a number of Peace Corps volunteers are reportedly tattooed Samoan style — and during World War II, some US marines were similarly tattooed.

Recently, there has been an

upsurge in the popularity of Samoan tattooing. It is taking place daily in all parts of Samoa and people with tattoos are a common sight these days.

It is not hard to recognise tattooed people because people here are tattooed from the waist on down to the knees. It is a pity that there is no registry of tattooed people, but the number certainly runs into the thousands and continues to increase despite the LMS Church's old ban. If a member of the LMS Church has violated the anti-tattoo rule, he is banned from Holy Communion, but only for a short time. For Catholics, there is no worry.

A famous example of how Samoans would go to any length to have a tattoo is that of a Samoan king of the late 1800s, Malietoa Laupepa. Malietoa was about 70. Many of his people did not give him their total allegiance because he did not have a tattoo. So, despite his age, he finally agreed to go through the ordeal.

Tattooing, Samoan style, is

far from being a picnic. It is a very painful process. Common reactions during tattooing are crying, screaming, cursing, sobbing and so on. Some feel the pain more than others. To help relieve the pain, the tattooing is usually done on as many young men as possible simultaneously. And, in the old days, pretty village maidens used to soothe the young men with their touch, smiles and songs.

The late Sir Peter Buck, the noted Maori anthropologist, has made a study of Samoan tattooing. (Lots of other highly scientific studies have been made since.) According to Sir Peter, tattooing implements include a wooden container called the *tinoma*; tattooing combs made of human bone or boar's tusk lashed to a turtle-shell plate fastened to a handle, and the mallet called *sausau* made of dry *lapalapa* (dry, hard part of coconut leaf). There are four different types of combs, each used for a specific function. One is for making dots, one for fine lines, one for thick lines and one for filling in the dark parts.

The pigment, Sir Peter said, is made from the soot of the candlenut and is kept in a coconut shell called *pupu lama*. The *lama* (soot) is ground in the coconut shell and water is added to it. The resultant mixture is placed in the *ipu tau lama*, which is half a coconut shell covered with a taro leaf. Towels of *siapo* are used for stretching the skin and wiping off the blood.

At the end of the tattooing ceremony, the subject is sprinkled with coconut milk to remove the tabu he has been under for many weeks or months.

Nowadays, even children as young as nine are being tattooed, and there is a milder form of tattooing for women called the *malu*. Who says Samoan custom is dying out? This is certainly not true in the case of tattooing, of having a *pe'a, tatau, malofie*.

Samoans are doing their thing and they are not ashamed of it. How long this trend will continue is hard to say. When it is no longer practised, that will mark the decline and fall of the Samoan cultural empire.

FIJI: WHERE A GIRL MAY PAY TO GET A JOB

Sexual blackmail is alive and malevolent in Fiji, writes a young Fiji Indian woman. In a country where losing a job can mean being forced into an unwanted marriage, the average Fiji girl does not have much choice but to give in to the ugly whims of her superiors.

A girl hurried down the street, her raven black hair flying in the wind. A group of young men stood on the footpath. As she passed, one hissed 'Bajaroo' (Hindi for whore). The tears welled. Moments later, a limousine quietly slid to rest in front of the factory the girl had entered. The group of men signalled their respect to the pot-bellied factory owner as he emerged from his car. There lay the irony. Sumintra was the whore; the factory owner was the man who had made her one.

Sumintra, at 17, is starved for love and affection. For the past five years, life has been hard. Born a beauty, still a beauty, at 12 her father defiled her beneath his wife's nose. He threatened to kill them both if they told. Sumintra's father dropped her to school daily, picked her up each afternoon, beat her if he caught her speaking to a boy. According to Sumintra, he even kept guard outside the door while she went to the bathroom or the lavatory.

After two years, mother and daughter decided they could take no more. They escaped to an aunt's house and told all. But by the time the three told their story to the police the father had fled Fiji. Mother and daughter felt better times were ahead. But the aunt could not resist the urge to peddle gossip. Mother and daughter found themselves social outcasts. Even the aunt and two of Sumintra's brothers, who took over the family business, disowned her.

Sumintra, at 14, was trained



TROPICALITIES

Reviving an old art for \$35 000

Matagalalua Tavana's widely-travelled Polynesian Revue, based in Waikiki, Hawaii, has a new attraction — a young leading dancer from French Polynesia, Ioteve Tuhipua, who has had his entire body tattooed in the elaborate style of his ancestors (see cover picture). In the following account, TUNAMAONO APELU of The Samoa Times tells of the six-week project, costing \$35 000, in which Tavana took Ioteve and other members of the troupe to Western Samoa, one of the few remaining places where the old tattooing skills were still available:

An event worthy of a place in the records of the cultures of Polynesia recently ended quietly at Vailima, Western Samoa, at the residence of Asi Eikeni, Minister of Sports, Culture and Youth. This was the tattooing of a 21-year-old man from Rurutu, Austral Islands, in French Polynesia. He is Ioteve Tuhipua Puhetini, one of the leading dancers in Matagalalua Tavana's famous dancing troupe in Hawaii.

Ioteve said he wanted a complete Marquesan tattoo, which reaches from the neck and shoulders down to just above the ankles. He asked Tavana about it, but Tavana was unsure whether Ioteve was serious and really understood what he was asking. For a couple of months Ioteve kept pressing Tavana until Tavana decided to find out if it could be done. Investigations showed that the last tattoo in the Marquesan style was done about 120 years ago, before the missionaries banned tattooing altogether in those islands. It was also found that, since the art had been lost due to the missionaries' influence, no one

could meet Ioteve's wishes. Tavana, a man very much interested in the cultures and traditions of Polynesia, started to ask more questions.

Later it was revealed that any information needed on the Marquesas could be obtained from Germany, as the Germans had carried out the most thorough research on the Marquesas Island many years ago. So Tavana wrote to contacts in West Germany where complete pictures of a Marquesan tattoo were found. Copies were made and sent to Tavana.

The next stage was a tricky one. Who could study those pictures and fulfil Ioteve's desire? There was no one in French Polynesia who could do it in the traditional way. Tavana, after visiting Manua and finding no one there willing to do the tattooing, approached Asi Eikeni, a very good friend.

Asi was thrilled with the idea of a Marquesan tattoo done by a Samoan *tufuga*. Though it took two years in the past for a Marquesan man to complete his tattoo, Asi and Tavana believed a Samoan *tufuga* could complete the Marquesan tattoo in about one to one and a half months. Their confidence in Samoan *tufuga* was later confirmed when Ioteve's tattoo was completed in only six weeks.

Asi contacted his neighbour, Taumuaafono Leatigaga Sio, (Joe Belford) and he recommended his cousin, Lesa Li'o, of Siumu, who has tattooed over 200 Samoans, including a few women. Tavana and Ioteve moved to Western Samoa for the big event. Lesa Li'o studied the photographs and drawings for four weeks then took his mallet, dye and the other tools of his trade and started tattooing Ioteve, beginning from the chest and shoulders. He worked from eight to one o'clock, Monday to Friday, until the whole tattoo was completed just before midday on Tuesday.

Matagalalua Tavana is very grateful to the Samoans, especially Asi Eikeni, for making it possible for Ioteve to have his tattoo done in Western Samoa. When Tavana was asked if the Marquesans would not feel offended, he said: 'Why should they? We are all Polynesians



and we all originated from Savaii in Western Samoa.' Matagalalua Tavana is a very successful multi-million dollar entertainment entrepreneur in Hawaii. There are about 100 people in his dancing troupe, most of them Samoans. 'I like the Samoans because their culture is still a living thing, not something just put on for the tourists,' Tavana said.

Tavana never knew his father, a Norwegian, and his mother died when he was only three. He belongs to the Teva clan in Tahiti, a family of traditional priests and *tufuga* which ruled over the district of Papara. His great-grand-aunt, Marau Taaroa, was Tahiti's last queen, wife of King Pomare V.

Tavana started his dancing show in 1950, and he has taken his show to many countries around the world. Ioteve, one of his main dancers, has danced in Germany, France, Belgium, Egypt, Israel, in several South American countries, the US and Mexico. Ioteve can do the Samoan *siva* and the *faataupati* (clap dance) very well. He is one of the heirs to Tavana's

Reconstructed from sketches and descriptions by early explorers in the Pacific, the above engraving was one of the earliest published in the Old World to show what Marquesan body tattoos looked like nearly two centuries ago. It is dated 1804 and is from a German work, but others with slight variations were also published early last century in French and English books and reports.

wealth, the other two being a daughter who is married to a Tongan prince, and Malala, an adopted Samoan son.

At the end of September, *tufuga* Lesa Li'o and Taumuaafono Leatigaga Sio were to travel to Hawaii to be Tavana's guests in his palatial home on his two-acre property in Honolulu.

The whole Marquesan tattoo project cost Tavana about \$35 000, but according to Tavana, it is money well spent. He hopes that the Marquesan tattoo project will help bring the Polynesian peoples closer together, and encourage a concerted effort to conserve their cultures and traditions.

Matagalalua Tavana and his



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TROPICALITIES

party presented to Western Samoa's Head of State, His Highness Malietoa Tanumafili II, a Tahitian *sua* at Vailima, an expression of their appreciation for the love and care shown to them by so many Samoans during their stay.

'Without the help of the Samoans, I would not be where I am today,' Tavana said.

New U.S. grant for Fiji blind

The American Ambassador to Fiji, William Bodde Jr, has praised the work of the Fiji Blind Society and Helen Keller International (a private US organisation) and announced an additional grant of \$142 000 to assist in continuation of their joint project.

'During the past year, many Fiji citizens have contributed both time and money towards helping their fellow beings, who have been deprived wholly or partially of sight,' said Ambassador Bodde. 'It is this sort of private endeavour which best expresses the Fiji character of service towards one's fellow man.'

Helen Keller International is an internationally known humanitarian organisation which provides specialised training for blind persons in many countries of the world. It joined forces with the Fiji Blind Society a year ago in order to assist and expand services to the blind in Fiji.

The original aid grant was for \$167 000 which was used to develop the programme in the last 12 months. The period stimulated interest not only within Fiji but from other international donors.

'It is a pleasure to note,' said Ambassador Bodde, 'that we have been joined in support of this very worthwhile project by the Christoffel-Blindenmission, the Royal Commonwealth Society for the Blind, the Canadian International Development Agency and the Canadian National Institute for the Blind, among others.'

'But the most important contributions in both time and money are those which have been made by the people of Fiji themselves who have provided free services to the activity, as



Back in Hawaii, Ioteve Tuhipua displays his tattoos. Only his face, hands and feet were left untouched during the tattooing sessions spread over six weeks. — Sherée Lipton picture.

well as funds to purchase such items as motor scooters to allow the Fiji Blind Society trainers to travel through rural villages working with the adult blind.'

Guam catalogues 3000 maps

Three thousand maps have been catalogued at the University of Guam's Micronesian Area Research Center (MARC), completing a project that began in July 1980, according to a report in the weekly, *Marianas Variety*.

Until the cataloguing programme was started, MARC's collection of Spanish Document Maps, and its general map collection, had not been organised.

Undertaking the task of processing the maps and classifying them under a modified Library of Congress System, was Rebecca A. Wilson. Ms Wilson had done similar work with the 125 000-item map collection at the University of Oregon.

Five hundred and thirty-six of MARC's maps are in the Spanish Document Collection. These are primarily photographic copies of originals which are in Spanish archives.

The bulk of the collection contains in all 2221 Pacific-area maps. These include maps of the Caroline, Marshall, Mariana and Gilbert Islands,

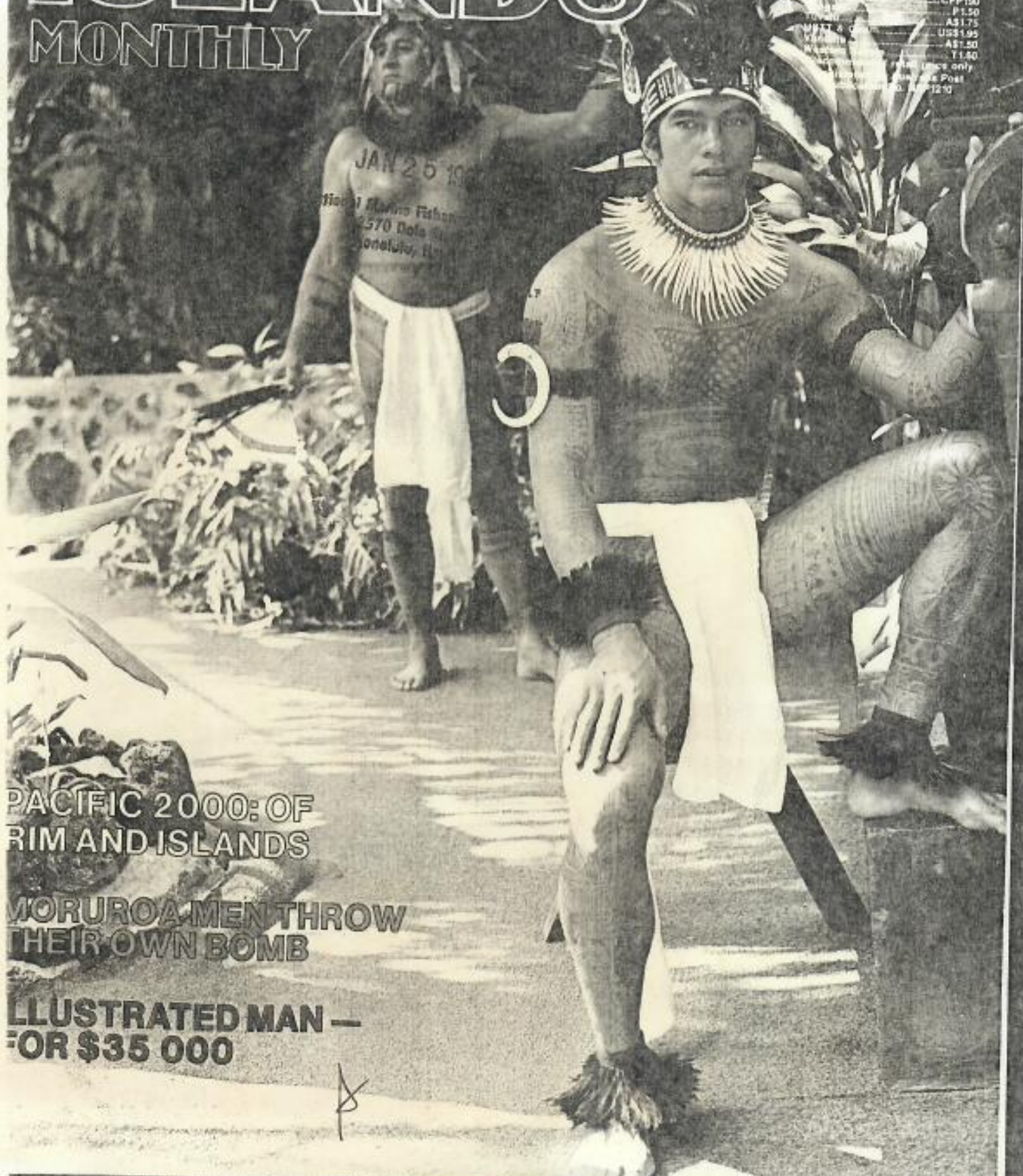
PACIFIC ISLANDS

MONTHLY

JANUARY, 1982

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PACIFIC 2000: OF
RIM AND ISLANDS

MORUROA MEN THROW
THEIR OWN BOMB

ILLUSTRATED MAN —
FOR \$35 000

Tattoo Stiggy: art in the flesh, with 5,434 color illustrations

United Press International

wherever I have space." Stiglitz, 46, said he began seriously collecting the designs in 1978, after he suffered three heart attacks. Now he has countless names and designs in virtually every color tattooed on his frame.

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"It's probably the most personal thing you can do for someone because they wear it for a lifetime," he said. "They're a living canvas."

Rene Poule, 29, of New York, said she had wanted a tattoo since she was 15 years old. In July 1981, she had a tiny bat tattooed on her chest.

"I've always wanted something that would make me stand out," she said.

"I wanted to be noticed. I've found that people respect me a little more, although they think I'm a little crazy."

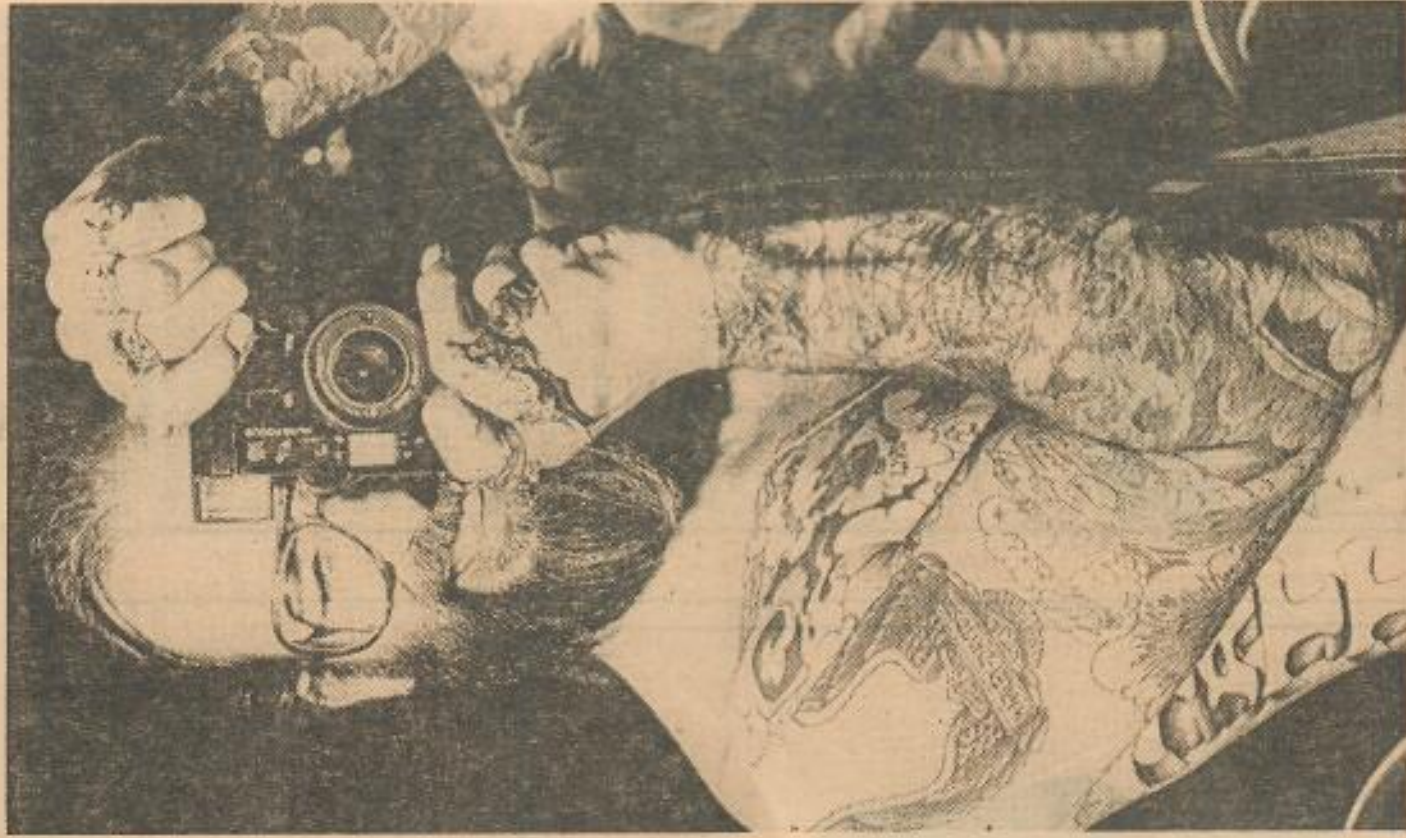
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Stiglitz, also known as "Tattoo Stiggy," got the first of his 5,434 tattoos when he was 13.

"I had an uncle who was heavily tattooed and just walked into a tattoo parlor and forgot to stop," Stiglitz said. "I'm going to keep on getting them



UPI photo
Keith Tramp of Fayetteville, N.C., snaps away at other tattoo enthusiasts during yesterday's convention.

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UPI photo

Women tattooed tongues

Tattoos told early Hawaiian warrior status

When King Kamehameha the Great died in 1819 many loyal subjects showed their respect by bashing out their front teeth, burning their skin with hot stones, or tattooing the king's name and the day he died on their bodies.

Some women even had their tongues tattooed, either with a thin black line or a small circle on the tip. These were not uncommon mourning practices.

The ancient art of tattooing most likely came to Hawaii with the first Polynesian voyagers.

Hawaiian slaves, called kauwas, were often branded with tattoos and lower class villagers bore tattoos identifying them as the property of the ruling chief.

But, by the time Captain Cook arrived in the islands in 1778 it was acceptable for anyone who wanted a tattoo to have one.

Accepted custom

Hawaiian tattoos were basic, simple designs - checkerboard patterns, a



Tattooed warrior

series of triangles, straight, wavy or zigzag lines - similar to designs found on early Hawaiian tapa cloth.

There were also pictographs of birds, fans and coconut trees, plus the human figures and goats which appear in ancient Hawaiian petroglyph. The rifle became a popular motif shortly after the first Europeans sailed to the islands carrying their guns.

The Hawaiian phrase for tattooing is "kakau i ka uhi" which literally means to put down or strike on the design. The technique is similar to using a hammer and chisel.

The chisel, however, is a very thin, delicate instrument with a "puncturing blade" attached. Once the design has been tapped onto the skin, black charcoal from the kukui nut is rubbed into the wound.

Temporary tattoos

The Hawaiians are accredited with a novel method of temporary tattooing which is achieved by applying certain plant juices to the skin, leaving a mark which would last about a year.

Hula dancers often wrapped the leaves of the

mau'u'ula'ili plant around their ankles, and if they liked the resulting design they would have a permanent tattoo made.

Although tattoos were applied to just about any part of the body, one practice often written about was the tattooing of one half of the body completely black.

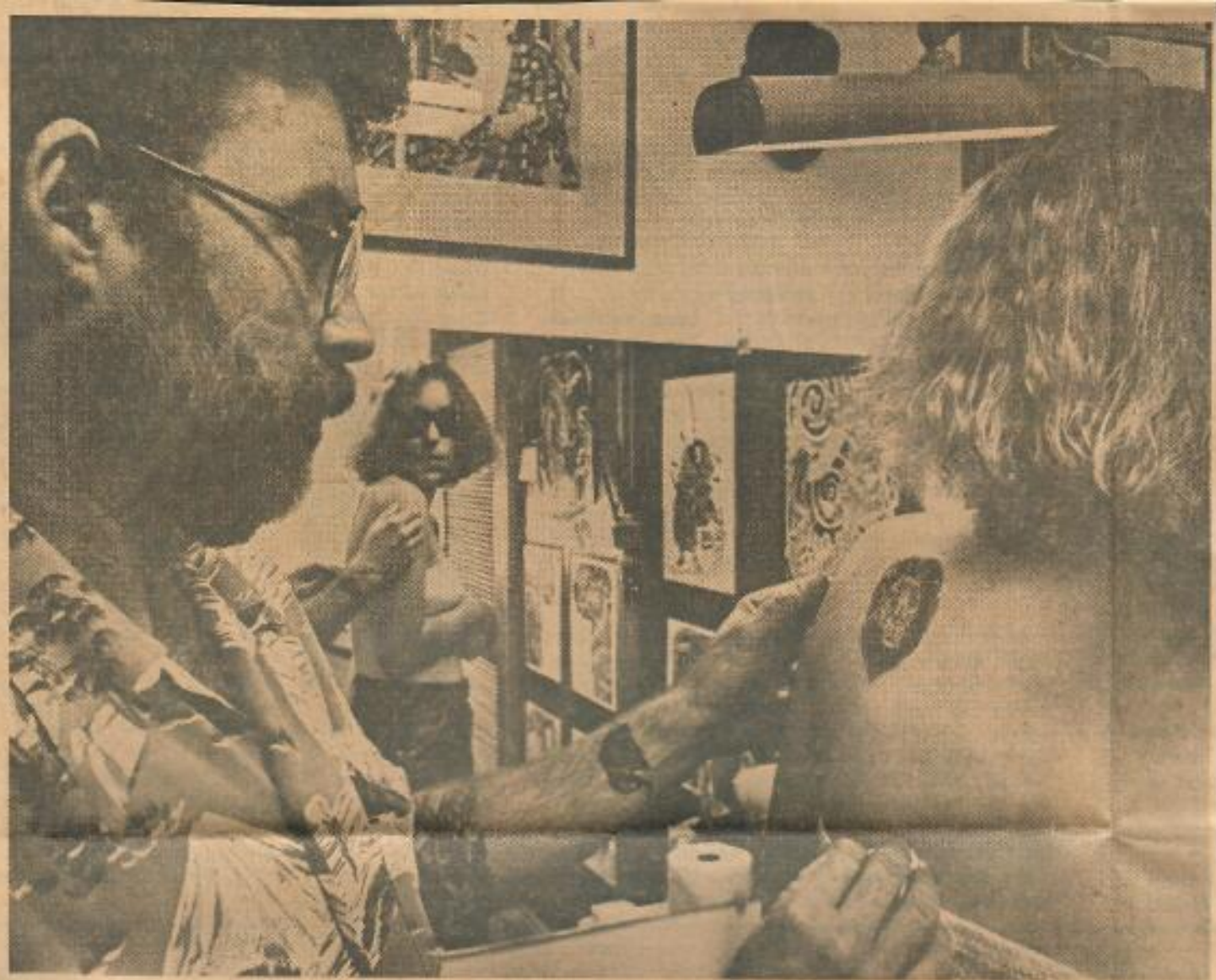
According to legend this pahupahu (halfway) design was the mark of Kabekili, the thunder god from ancient times, so that his descendants in the world would recognize him.

Women wore them

Women also wore tattoos - on their fingers, wrists and ankles - in designs resembling jewelry. A row of dots tattooed around the ankle was believed to ward off sharks.

According to another legend, a woman, whose aumakua was (a family or personal god) the shark god, was swimming one day when the aumakua seized her by the ankle. When she cried out, he recognized her and said, "I will not make that mistake again, for I will see the marks on your ankle."

The exacting precision of the tattoo designs and their cultural significance died out for Hawaiians after centuries of isolation from other Polynesian peoples.



The Rose Tattoo,

By Susan Yim, Star-Bulletin Writer

Winston Churchill's mother had a snake tattooed around her wrist. Rock singer Janis Joplin had a floral bracelet tattooed on her arm and a heart on her breast.

It isn't only men who are frequenting tattoo parlors.

It's not been unusual to see naked women, skulls and crossbones, hearts and flowers and "Mom" tattooed on the arms and chests of men. But tattoos on women?

In the past five years, more women are getting tattooed, according to tattoo artist Mike Malone, who's been in the business for 11 years.

Malone owns two tattoo shops in Honolulu, one on Smith Street for walk-in customers and another in McCully, which caters to women and is limited to business by appointment. Malone estimates he tattoos about 35 women a month in his shops.

The tattoos women request most often are soft, floral designs, or butterflies or ladybugs. "They're very small designs, not bigger than a 50-cent piece," says Malone.

He's done tattoos on the back of shoulders and on ankles and breasts. But, he says, 80 per cent of the women who come to him want tattoos on their hip, back or front, and that the most popular design is a butterfly.

Lindsay Young, had a cherry blossom tattooed on her ankle "on a whim."

Angie Davis, 39, of Kona, had a delicate rosebud tattooed in a spot that even the skimpiest bikini bottom covers. Why? "Because I want to be the only 80-year-old in the rest home with a tattoo on my rear," she says. Davis is so pleased with her tattoo that she plans to have a "coming out" party to display the work: she'll wear tight-fitting jeans with a small circle cut

out so guests can admire the rose tattoo.

Not all tattoos requested by women are as inconspicuous or feminine in design.

"I once tattooed a cartoon of a circus fat lady on a girl's stomach," Malone recalls. "She came in with a little drawing that she was dead set on. She explained that she had just lost 60 pounds and wanted the drawing put on her stomach to remind her that she used to be that big."

The tattoos take 10 to 15 minutes to put on with an electric needle if they're small and simple, 30 to 45 minutes if they're complicated.

Malone discourages tattoos smaller than an inch in diameter because from a distance they look like a multi-colored birthmark, he says.

The cherry blossom he tattooed above Lindsay Young's ankle took

The subject of a tattoo is limited only by the imagination. It can be something unique like a lion's head tattoo artist Mike Malone has tattooed on the back of a woman's shoulder, or a delicate butterfly on the back of the hip.



and Butterflies Too...

about 15 minutes. Rather than being painful, Young said the tattooing tickled.

Malone doesn't like to discuss price but the minimum is \$25 for a tattoo "on any private part of the body." He prefers to determine price with the customer, taking into account the intricacy of the design and the part of the body to be tattooed.

People should not try to tattoo themselves at home. Professional tattooists use sterilized instruments, special organic pigments, and some, like Malone's, look like doctors' examining rooms with examining tables, sterilizers and orderly surroundings.

"There's been a strange kind of carnival atmosphere associated with tattooing because it grew up around carnivals," Malone says. "But I'm trying to do the best I can

to move people away from that attitude."

He's pleased that more and more tattoos are being appreciated by women. A 22-year-old, for example, says one of her best birthday gifts was a cherry tattooed discreetly on the back part of her hip.

But for those souls not brave enough to get tattooed, there are decals that give a similar but less permanent design.

For some people, that butterfly on the hip or ladybug on the wrist may seem fun at 21, but at age 75 it may be another story.

Those who try to persuade young people from getting tattoos often point to golfer Lee Trevino, who had his wife's name tattooed on his arm. Unfortunately, the marriage wasn't as permanent as the tattoo, and he got divorced. His second wife was not at all amused by the tattoo and for years Trevino went around with a Band-aid on his arm.

Star-Bulletin

Today

Features

Entertainment



Honolulu, Wednesday, July 21, 1976

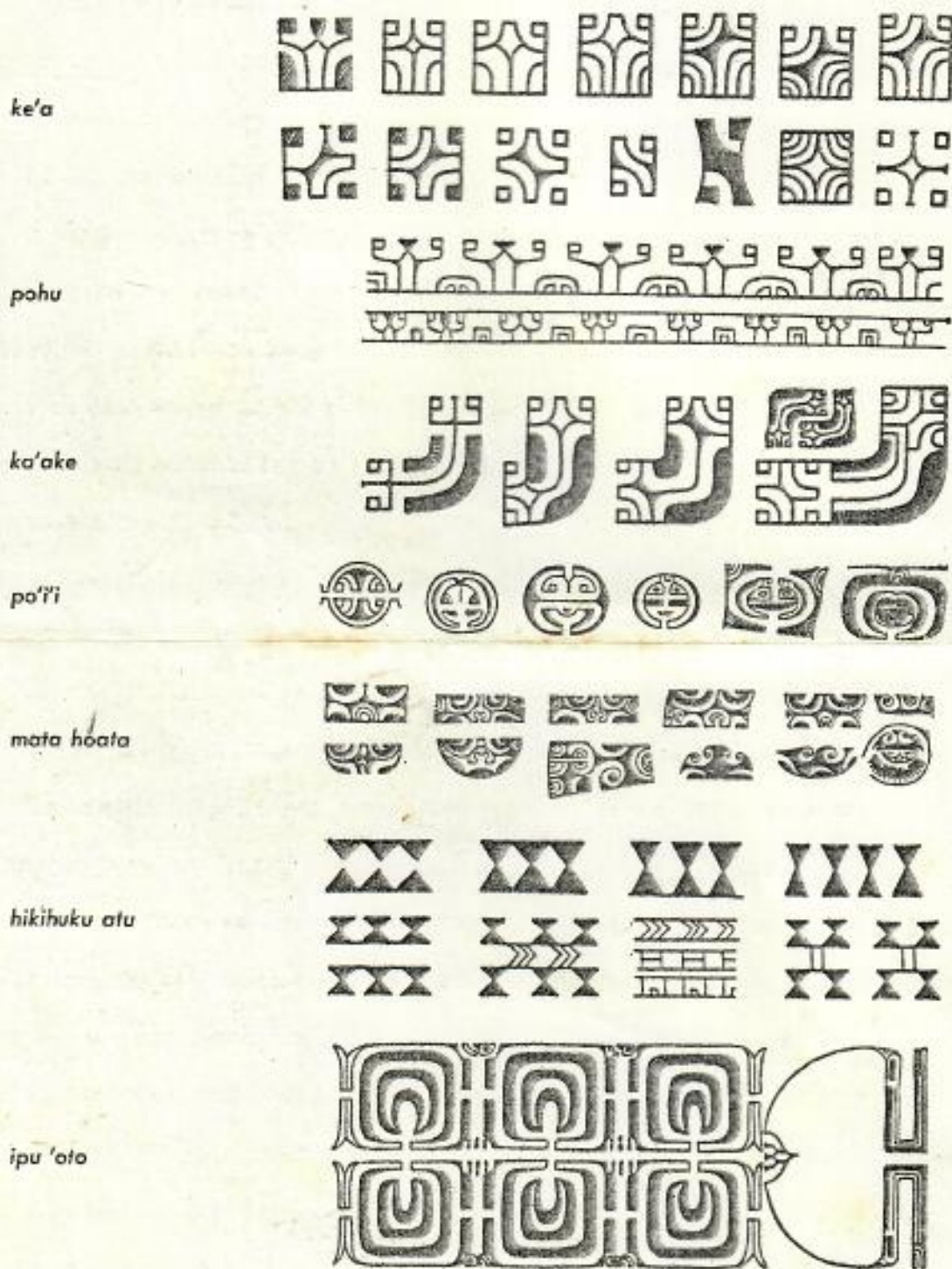


Fig. 15. Small motifs used in Marquesan tattooing
on both sexes. (From von den Steinen, 1925.)

Pao. f
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Stamm der Drios im südlichen British-Guiana fand man vom Scheitel zur Sohle tatauert, ähnlich etwa den Männern der Nukahivinsel.

Eine wesentlich andere Bedeutung hat das Tatauieren beim modernen zivilisierten Menschen, besonders beim Europäer. Ist es beim primitiven Menschen tief mit seinen Sitten und Vorstellungen und mit dem ganzen Volkleben verwachsen, so treten uns hier eigentlich nur mehr Abarten und Formen des Verfalls entgegen. Während Naturvölker eben jene Körperteile tatauieren, die sonst nicht bekleidet werden, verbirgt sich beim Europäer die Zeichnung ängstlich unter das Kleid. Von den unbedeckten Körperstellen wird höchstens die Hand zuwollen tatauert. Am häufigsten sind es die Arme, seltener die Brust, nur ausnahmsweise Unterleib, Kopf oder Geschlechtsteile, die gestichelt werden. Bei Personen, die sich zum Zwecke des Erwerbs reichlich tatauieren lassen, um dann gegen Geld die Bilder ihrer Haut in Schaubuden, Kaffeehäusern oder im Zirkus bewundern zu lassen, findet sich allerdings zuweilen fast der ganze Körper mit Figuren bedeckt. Die Abb. 13 und 14* zeigen eine solche Frau, die früher unter dem Namen Arabella auftrat, bei der Brust und Rücken und beide Arme und Beine bis zu den Hüften punktiert sind. Die einzelnen Figuren, besonders die Porträts auf der Brust, sind nicht völlig kunstlos ausgeführt. Was dem Ganzen aber den Eindruck des Stillosen verleiht, ist die Aneinanderreihung von verschiedenen Figuren ohne jeden inneren Zusammenhang, lediglich zur Raumauffüllung. Wir finden hier am selben Arm Blumen, Tiere, Christus am Kreuz, Frauenkörper, Schlangen u. a. m., wie es eben in der Form hinpaßt. An den Tatauierungen der Japaner

* Eine Bemerkung über das Photographieren von Tatauierungen mag hier angebracht sein: Die photographische Platte nimmt die blaue Farbe der Tuschetatauierung fast gar nicht an, und die mit der gebräuchlichen Methode aufgenommenen Bilder geben darum die Zeichnung meist in ganz unbefriedigendem Maße wieder. Durch diesen Umstand ist sehr viel wertvolles ethnographisches Material verloren gegangen, weil die Nachzeichnung der Ornamente sehr umständlich ist und nie volle Naturtreue erreicht. Auch ich habe unbrauchbare Bilder erhalten, bis ich dazu überging, eine dicke Gelscheibe und orthochromatische Platten zu benützen und sehr lange zu exponieren. Die Gelscheibe läßt fast ausschließlich selbe Strahlen durch, und da solche im Blau fehlen, im Weiß der Haut aber vorkommen, wird der Gegensatz zwischen Zeichnung und Haut schärfer.

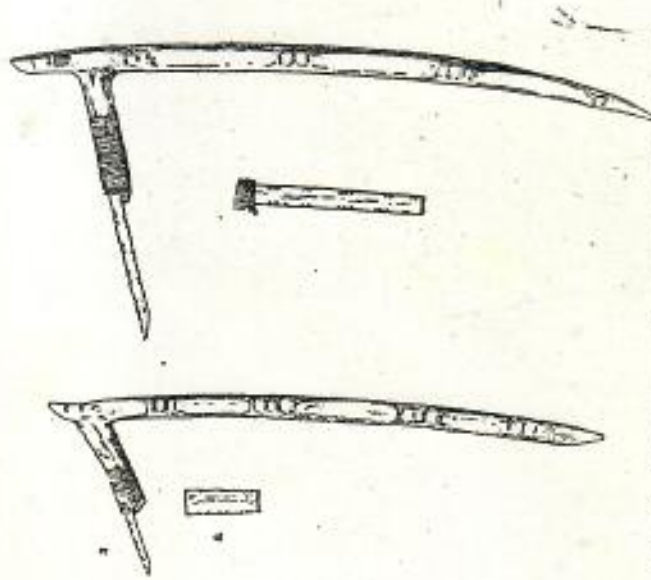


Abb. 18. Tatauierwerkzeuge von Neuseeland.

Nach Joest: Tätowieren.
(Verlag Behrend & Cie., Berlin W 9.)

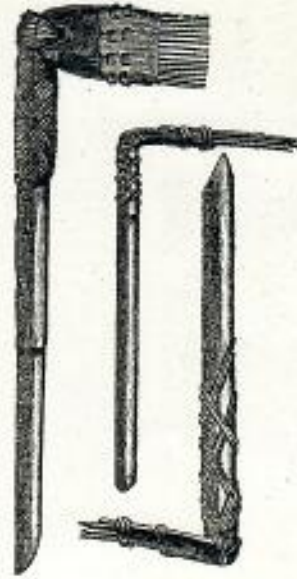


Abb. 19. Tatauierwerkzeuge von den Freundschafts-Inseln.

Nach Ratzel: Völkerkunde.
(Verlag BSB, Institut Leipzig.)

Das Tatauieren
Eine monographische Darstellung
von Dr. med. Paul Cattani
Bernro Schwabe & Co., Verlag Basel 1922

GN 419.3 C3

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889

Speichel angetrieben wird, sind ernstere Entzündungen gar nicht so selten. Es kann zur Entwicklung von Erysipel, Phlegmonen, Gangrän, Lymphangitis, Blutungen, arteriovenösem Aneurysma, Wundstarrkrampf kommen, die unter Umständen lebensgefährlichen Charakter annehmen können. Es kam in der Folge schon zu Amputation von Gliedmaßen und zu Todesfällen (Berchon, Rayer). Ernste Folgen sind offenbar auch bei unzivilisierten Völkern keine Seitenhieb. Todesfälle sah Krämer z. B. auf Samoa, „wo bei mehreren der Beteiligten heftige Zellgewebsentzündungen ausbrachen, denen einige Jünglinge zum Opfer fielen“.

Da bei einzelnen Menschen die Haut auch nach geringfügigen Verletzungen mit Bildung von großen vorragenden Narben, sogenannten Keloiden, antwortet, ist auch diese Nebenerscheinung als Folge der Tatauierung möglich. Wir sahen schon, daß bei dunkelhäutigen Völkern die Bildung von Narben und Keloiden oft beabsichtigt wird und zum Teil die Tatauierung ersetzt.

Wenn der Tatauierende die *Spirochaeta pallida* im Munde führt und mit seinem Speichel die Farben mischt, wie es häufig vorkommt, kann die Übertragung einer Syphilis nicht übersehen werden. Petry, Polroux, Maury, Dulles, Arthur, Barker, Goronzek, Pospelow, Whitehead, Robert, Hutin, Roller, Berger u. a. haben solche Syphilisübertragungen gesehen, und die Anzahl der in der Literatur festgelegten, naturgemäß nur einen kleinen Teil umfassenden Fälle beläuft sich wohl auf sechzig bis siebzig. Gerade bei den mit Syphilis vollständig durchsuchten Eingeborenen mancher Südseeinsel ist bei dem Mangel aller hygienischen Einsicht dieser Weg der Syphilisausbreitung nicht zu unterschätzen. Von der immerhin möglichen Übertragung der Lepra durch Tatauieren ist mir nichts bekannt geworden.

Auch die Inokulation von Tuberkulose ist mehrmals beobachtet worden und geht meist auch vom ansteckenden Speichel der Tatauierenden aus. Es entwickelt sich im Anschluß an die Stichung eine Form der Hauttuberkulose, Lupus, Tuberculosis cutis verrucosa usw. (Jadassohn, Goronzek, Liebreich, Dove).

Oppenheim sah eine Tatauierung, die sich in der Nähe einer Warze ausbreitete, und daran anschließend im Bereiche



Abb. 24. Völlig tatauerter Häuptling von Nukahiva.
Aus Wuttke: Entstehung der Schrift.
(Verlag Ch. H. Tschubert, Leipzig.)

der gesamten Zeichnung Aufschließen von Warzen. Bekanntlich hat erst J a s o h n die Ansteckungsfähigkeit der verruca vulgaris experimentell nachgewiesen, obwohl das ein alter Volksglaube ist.

Mit der Tatauerungsfrage hängt noch manches interessante medizinisch-biologische Problem zusammen: Es wurde z. B. wahrgenommen, daß auf mit Tusche tatauierten Hautflächen bei Syphilis sehr reichlich Effloreszenzen aufschießen (Dohi), was auf Reizung des Gewebes zurückgeführt wird. An den mit Zinnober tatauierten Stellen ist keine Spur von syphilitischem Ausschlag wahrzunehmen (Dohi, Arning, Florange, Holland). Zinnober, Hydrargyrum sulfuratum rubrum, spaltet in der Haut langsam Quecksilber ab. „Trotz dieser äußersten Geringheit ist die Giftmenge groß genug, um zu veranlassen, daß die Spirochaeten halt machen vor dem Schutzwall von Zinnober, wie eine anstürmende Horde vor dem Wallgraben einer Burg“ (Arning). Diese Tatsache erscheint geeignet, die Meinung Neißers, Ehrlichs u. a. zu unterstützen, nach denen Quecksilber direkt gegen die Spirochaete wirkt und die Bildung eines Infiltrates, wie es Finger annahm, unnötig ist. Arning und Ullmann beobachteten Fälle von Zinnoberdermatitis, beruhend auf Quecksilberüberempfindlichkeit.

Die Tatsache, daß auf Zinnobertatauerung keine syphilitischen Ausschläge entstehen, führt zur Frage, ob es nicht möglich wäre, bei bestimmten Hautkrankheiten mittelst der Tatauerung Heilmittel in den Krankheitsherd einzuführen, also zu therapeutischen Zwecken zu tatauieren. In Betracht kämen nur lokalisierte chronische Hautleiden, wie etwa der Lupus, Lichen chronicus u. a. Als Medikamente kämen solche in Betracht, deren Heilwirkung bei diesen Krankheiten bekannt ist, die aber bisher nur als Salben äußerlich angewendet wurden. Über solche Versuche ist mir nichts bekannt geworden.

V. Histologie der Tatauerungen.

Wenn man Tatauerungen mit dem Platinkauter entfernt, so fällt sofort auf, daß sich die oberste Hautschicht, die Epidermis, als völlig farbfreies Häutchen abschälen läßt, unter dem dann erst die Farblage zum Vorschein kommt. Es läßt sich bei Operationen an Tatauerungen auch makroskopisch fest-

Casani, Tataueren.

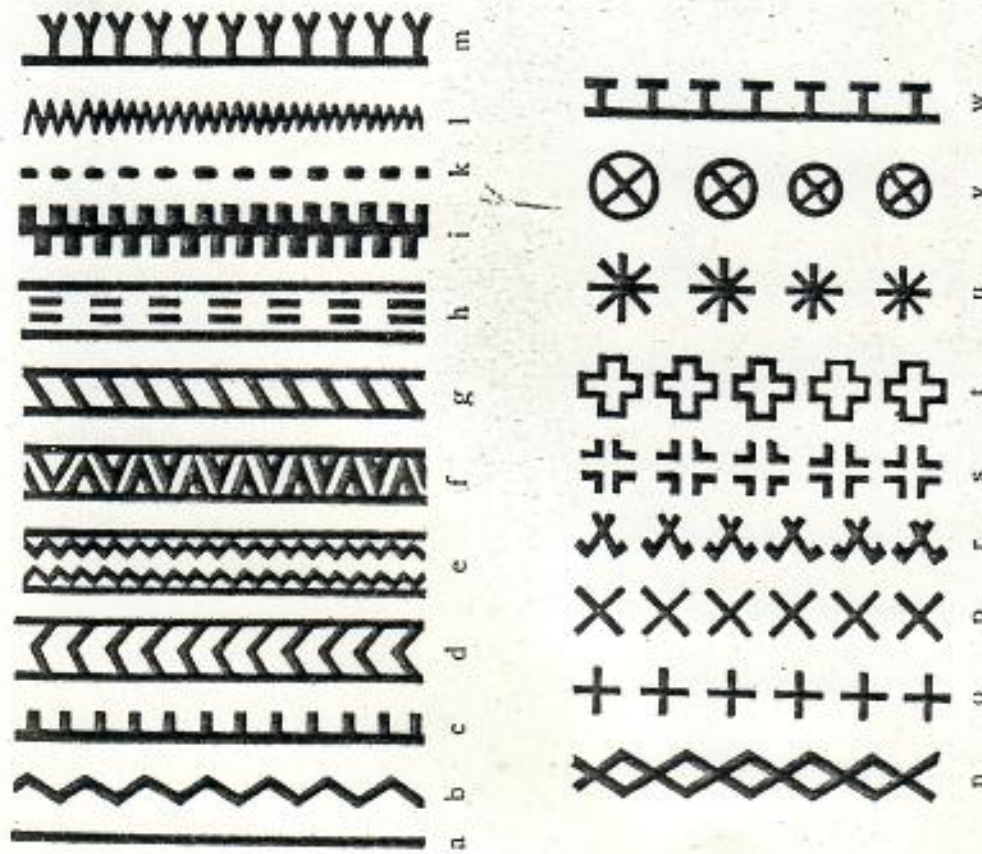


Abb. 25. Tatauermuster von den Pelau-Inseln.*

Aus Joest: Tätowieren.

(Verlag Behrend & Cie., Berlin W 9.)

* Die einzelnen Strahlen (Abb. 7 und 10) bestehen aus diesen Mustern, von denen jedes seinen eigenen Namen trägt.

NORTH AFRICA

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Bruno Barbey/Magnum. Marrakesh, March 1979.

“F ez lies very still. It is a city of silence. The draped figures in their varicolored jellabas keep their age and weight a secret. They could be sketched by a child who has learned drawing: a blotch of color against the landscape, moved by the wind.”

ANAÏS NIN

“The Labyrinthine City of Fez,” October/November 1973

“In Marrakesh more than in other cities, the eye is continually being encouraged to contemplate that which is far away. Automatically it follows the line of the ramparts to the empty plain, coming to rest on the most distant vista. The mountains are so much a part of the scene that on the days when they are invisible the city seems incomplete.”

PAUL BOWLES

“What’s So Different About Marrakesh?” June/July 1971

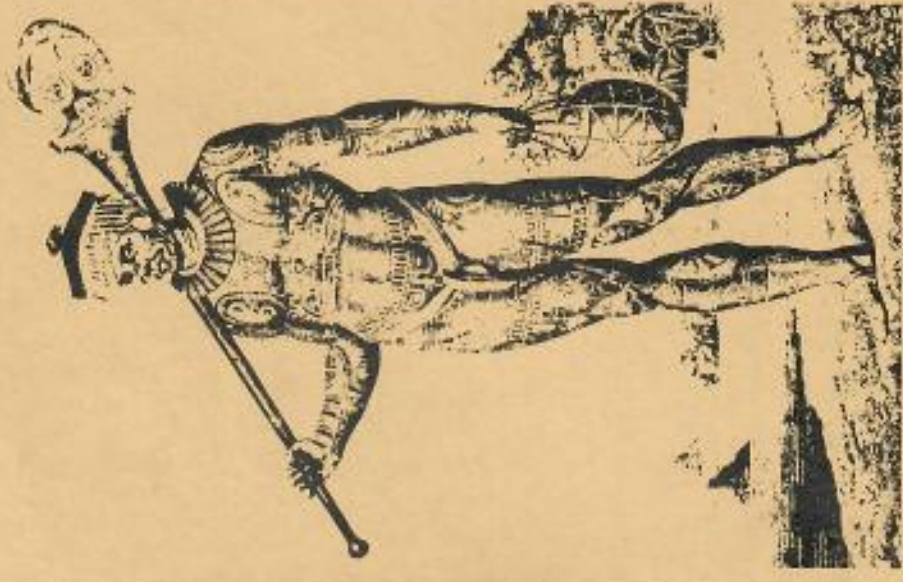


Burt Glinn/Magnum. Marrakesh, Morocco. June/July 1971.

TATTOO ART MUSEUM

30 Seventh Street
San Francisco 94103

Lyle Tuttle, Director
Suzanne Tuttle, Curator



Tattooed Marquesan Islander - 1804

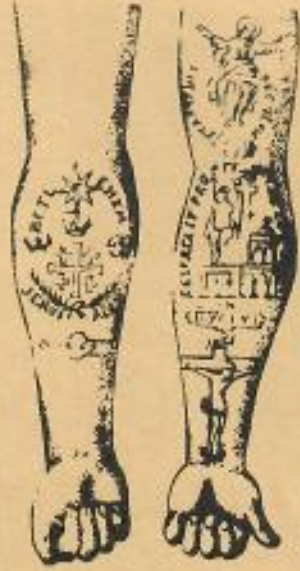
The purpose of the Tattoo Art Museum is to research, record, preserve and display the history and use of body decorations. While the primary focus is on tattooing, the interrelated subjects of facial and body painting and scarification are also dealt with.

Lyle Tuttle was born in Millererton, Iowa in 1931, and was raised in Ukiah, California. He became interested in tattooing after receiving his first tattoo at age fourteen. Lyle studied with C.J. (Pop) Eddy and started tattooing professionally at seventeen. As a U.S. Marine he visited and worked in Japan and Hong Kong learning oriental techniques. He then returned to study with Master Tattoo Artist Bert Grimm, and established his own studio in San Francisco in 1957. Since then he has continued to travel, lecture and collect personal tattoos. As his tattoo memorabilia collection grew the Museum idea was formed and became a reality in 1974.

The Museum is made up from a collection assembled by Lyle Tuttle. Tattooing techniques and equipment are displayed in a collection of hand and mechanical instruments. The Museum also houses a gallery of hand drawn designs from hundreds of artist past and present. The library contains books, photos and information on tattoo artists and periodicals of every aspect of this fascinating, artistic, cosmetic, and religious art.

"The only thing new in the world is the history you do not know."

Harry S. Truman



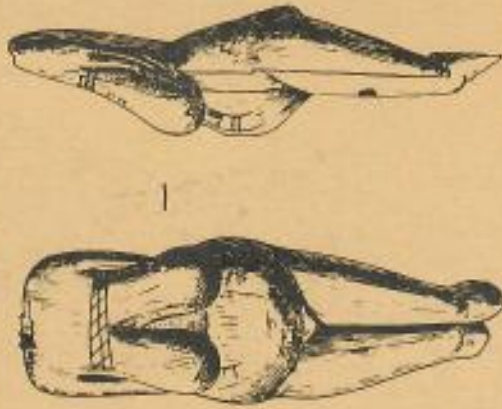
Arms of German Pilgrim Tattooed in Jerusalem 1669

The history of tattooing was greatly influenced by an 8th Century papal edict banning its practice by the largely Catholic population of Europe. Tattooing there became the province of the churchless, the wanderer, the adventurer and the criminal. (In many lands prisoners were tattooed with identifying marks.) It became the mark of the sailor, the pirate, and the pilgrim, and was, fittingly enough, re-introduced to polite European society by Captain James Cook, who created a sensation with the "painted princes" he brought home from his sea voyages. Soon tattooed natives became the rage, beginning a long history of tattoo display in carnivals, circuses and fairs.

'Both sexes paint their Bodys, Tattoow as it is called in their language. This is done by inlaying the colour of Black under their skins in such a manner as to be indelible.'

Captain Cook's First Voyage, July 1796

The exact origins of tattooing are unknown, but evidences of facial and body painting, tattooing and scarification have been unearthed on archeological sites throughout the world. While early man still depended on tools, weapons and tattooing implements made of flint and bone, body decorations already played an important role in his life to death cycle.

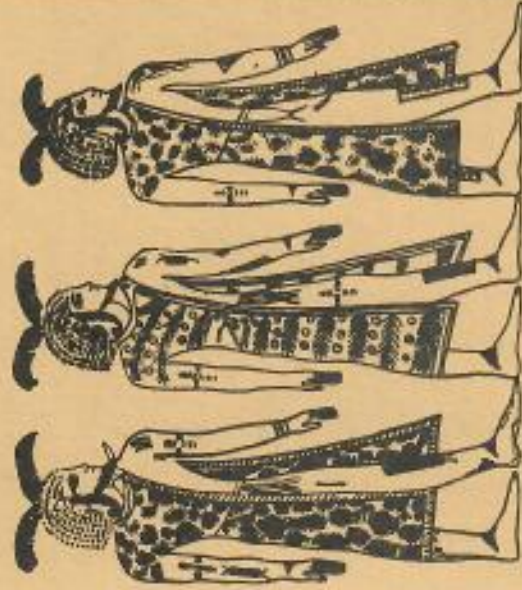


Stone age Statuete

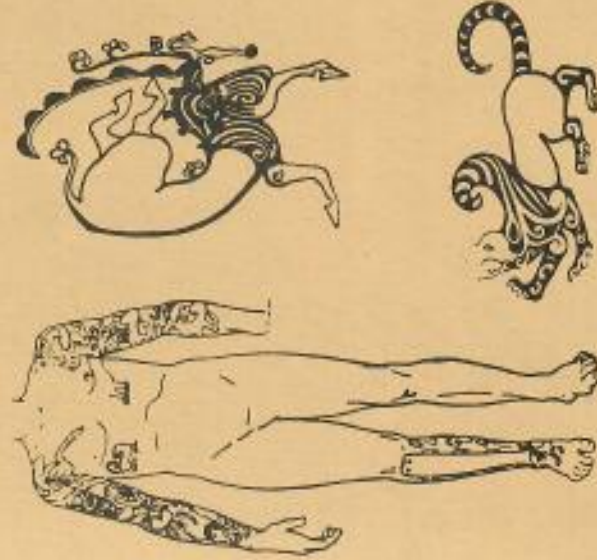
Wall paintings and carvings of human figures found in caves in France and Spain and dating from the late Pleistocene period clearly show body designs. Tattooing was already a highly developed art as Egypt built the great pyramids. Mummies of both sexes reveal delicate tattoos preserved for 4000 years.



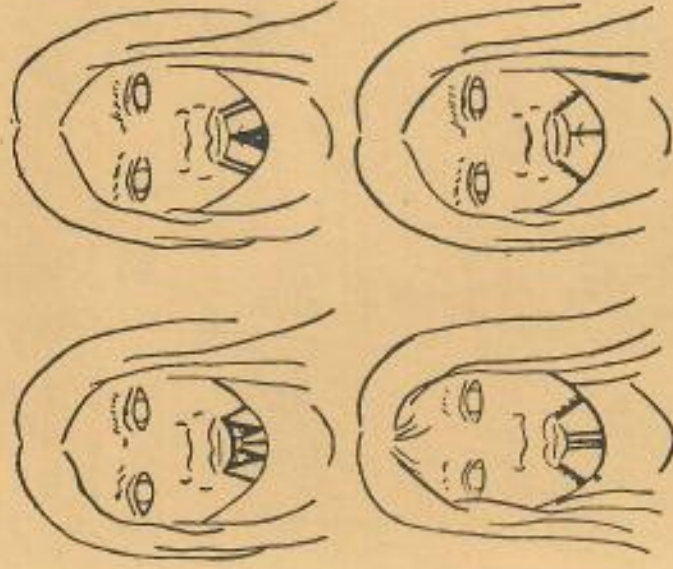
Eastern Eskimo - Early 1700's



Tattooed figures, Egyptian Tomb Painting - circa 1330 B.C.



Scythian Tattooing - 500 B.C.



Chin Tattooing, Mohave Indians



From Japanese Wood Block Print - Edo Period

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TATTOOING is as ancient as time; modern as tomorrow. Its origin is unknown, but it was used by an ancient people in what is now Iran approximately 10,000 years ago. In every primitive and modern civilization known to man the art of Tattooing has been practiced. Tattooing until 1905 was a slow and painful process. With the invention of the Electric Tattooing Machine the average design may be completed in a matter of minutes, with the benefit of hospital-type sterilization.

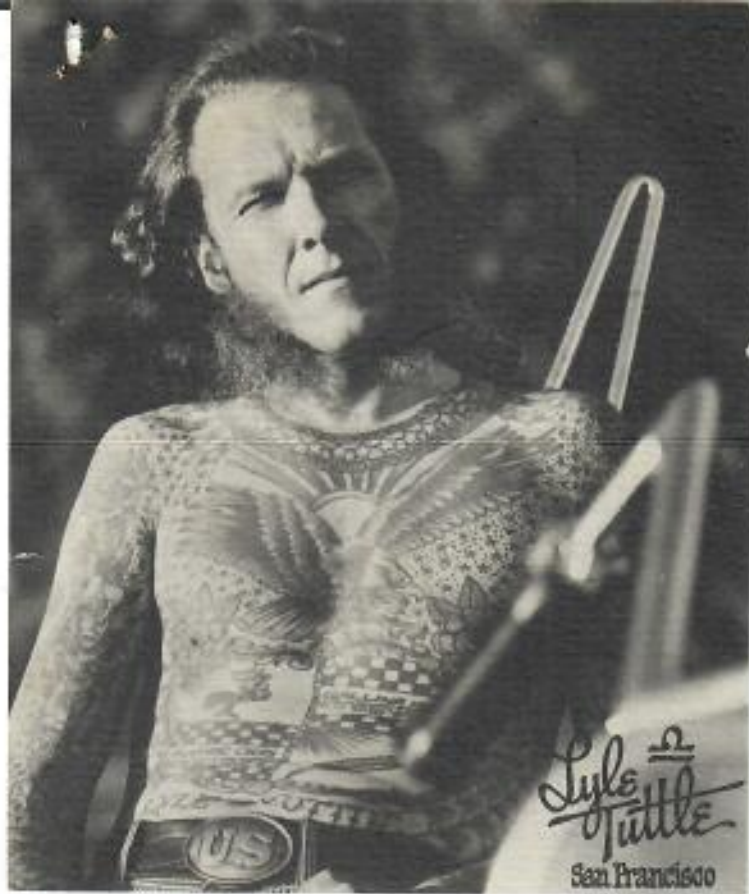
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Dear Sir:

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Please let me know if I can help you further

Best regards
Lyle Tuttle

 *Lyle Tuttle* **TATTOOING**

**30 Seventh Street, San Francisco
California 94103**



a cross tattooed on their arms [51]. The branding of horses and other animals was practised in Sweden in the early twentieth century. In Norway and Denmark the punishment by branding was abolished during the early nineteenth century [55]. Today Copenhagen is the centre of tattooing in Scandinavia.

*Tattooing
The Prevalence of Tattooed Persons
in Total Population.
Association with Skin
and Rheumatic Diseases
by Lars Helgren
1967 72P
Almqvist and Wiksell
Stockholm*

MATERIAL AND METHODS OF TATTOOING
LITERATURE

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Technique

Painting with red ochre certainly was the first form of tattooing used, probably already in Paleolithic times [43]. Multiple puncture of the skin in the desired patterns, and into which the colouring material was rubbed was an early technique used [70]. Needles with the thread impregnated with soot drawn through the skin were used in Greenland [23]. A more advanced technique was to draw a pattern on the skin with paint and by means of needles implant the pigments. The "needles" used to be, e.g. thorns, sharp teeth, shells, bones, sharpened pieces of wood [35, 100, 101]. A primitive method, practised in the Swedish Army and Navy, and earlier used by pilgrims from Jerusalem during the seventeenth century [98, 107] was to cut waves in the skin and rub gunpowder which was then ignited. Hand tattooing with either a simple or multiple technique is slow, painful and imprecise [92] and modern "artists" use a special electric needle or a battery of needles [89, 97] attached to an electric vibrator [70]. The electric type machine is a pistol shaped instrument, the patterns being drawn with from two to seven needles of the same type, arranged in a cone shape to produce a fine point. The filling or shading is done by six to twelve needles of the same size soldered to the needle bar in a straight line. The needle bar is vibrated rapidly by an electro magnet operated through a transformer [92, 121]. The area to be tattooed is shaved, and washed with alcohol or a solution of 2% cresol or lysol and then dried. A thin layer of carborated vaseline is smeared over the area. The pattern is marked on a celluloid stencil by means of a series of cuts, which is then dusted with dye powder by the fingers. The stencil is placed on the exact site decided, for transfer of the outline and the pigments, usually two to four colours, are transferred by adhesion to the vaselined skin, thus producing an outline of the design upon the skin [70, 121]. The needles are dipped in various colours containing the coloured dyes. During the needling a certain amount of blood oozes from the area, which is removed afterwards [70]. A pattern drawn by lead pencil on a half transparent paper, or with hectographic ink, pressed on to the skin, is also sometimes used. To draw motives free hand is difficult and time consuming.

Pigments

Many different kinds of pigments or dyes are used and nearly every colour of the spectrum can be reproduced in the skin. For example: *Blue*: cobaltous aluminate, azure blue, cobalt ultramarine. *Green*: chromium oxide, chromium sesquioxide, hydrated chromium sesquioxide, phthalocyanine, green coal tar dyes, vermilion, smaragdgreen. *Red*: cinnabar (mercuric sulfide), cadmium selenide (cadmium red), sienna (ferric hydrate), carmine, red Pelican tusch [86]. *Yellow*: cadmium sulphide, curcuma yellow [86]. *Violet*: manganese violet, mixture of cinnabar and Russ, mixture of black and red tusch [70, 86, 90, 116]. *Indigo*: Berlin blue, "schliess pulver", ashes from animals and plants, ink, blue Pelikan tusch [86]. *Black*: finely dispersed carbon in ammoniacal solution, iron oxide, extract of logwood. *Brown*: natural ferric hydrate, basic ferric sulphate. *White*: titanium oxide, zinc oxide, lithium oxide [78]. *Orange*: mercuric sulphide, cadmium selenide, ferric hydrate, carmine. *Flesh colours*: iron oxides of varying shades [70, 86, 90, 116]. In prisons for example where tattooing is forbidden, traces of dust and other matter are introduced into the skin together with fat and burned to achieve a coloured effect [6]. Soot or ink is used for blue or black, brick dust for red and urine is used for mixing [97]. Amongst teenagers in England ink and stove blacking have been popular pigments [9].

Tattooers

The demand for tattooing during certain periods, raises the prestige of tattoo "artists" considerably and even today they refer to themselves as "professors" [23]. Sometimes women also are tattooists [43]. Sweden has always been short of tattooers. The best known professional Swedish tattooists were Otto Sundmark and Karl Gustafsson, but dilettantes have always been common in Sweden, as elsewhere, for example on the ships of the Swedish Navy, in prisons and camps, barracks, reformatories, lodgings and public baths. The majority of tattooers work in large ports, or cities, near large concentrations of migratory workers or the armed forces [36, 87, 121]. In places where tattooists establish their shops, epidemics of tattooing often develop and then the tattooist has a good living, but in the intermissions his livelihood depends on the occasional demand [108]. Hamburg, London, Rotterdam, and Copenhagen are important centres of tattooing in Europe [74].

Motifs

The wording of the motifs is dictated by the techniques used and give the picture a special character, that is different from other drawings. Faces

are generally drawn side-face, every unnecessary line is avoided and the few colours show clear and unmixed beside each other. In spite of the wording of the motifs, tattooists can often leave their individual marks on a picture so that an expert is soon able to recognise the work of different "artists". Motifs often show the uncomplicated mans view of life, his occupation, milieu, interests and his women in different forms. They usually come from patterns, stencils, papers and photographs which the tattooists have inherited or bought and they also sell albums or isolated pictures to each other. The range of motifs are only slowly renewed and modern pictures are therefore seldom included. Some tattooists are clever craftsmen, who understand the wording technique to join together the motifs into beautiful pictures, but most tattoos are badly done and spaced unpleasantly in relationship to each other. The simple patterns are often performed by amateurs and the more complicated ones by experienced tattoo specialists. The motifs chosen are often a function of occasion, sentiment at the moment of tattooing, persuasion, suggestion, desire to imitate, lack of motifs or of money [25, 101].

Attempts to classify tattoos according to motifs, patterns and localisation have been made [97]. Common groups of motifs are: Professional emblems: ships, anchors, horses' heads. Symbolic pictures: "true love", hope, a swallow with a letter in its beak, a hand offering a rose, hearts, a fist striking a blow. Patriotic motifs: flags, "United liberty". Nautical and military: the Swedish coat of arms, flags [26, 43]. Religious and commemoration: Jesus Christ, private symbols, the significance of which are limited to their wearer, identification tattoos, "Friday the 13th". Flowers: roses, other flowers with words. Animals and birds: horses, tigers, dragons, swallows. Women: girls in their underwear, snake-charmers, nudes, geishas, pictures of a fiancée. Sentimental: girls' name, flowers. Love tattoos: idealised love, woman's head in a flower or a half moon, women draped in a flag, "mother", "rest in piece my dear mother". Pornographic: nude with or without snakes, tattoo presenting an obscene view to the wearer and a more acceptable view when inverted to the viewer. Homosexual: i.e. true love. Aggressive and pseudo-heroic: skull and cross bones, dagger with "death before dishonour." Theatrical: Buffalo Bill, Charlie Chaplin, Micky Mouse, Donald Duck. Humouristic tattooing.

Body areas tattooed (men)

Breast: often a head motif, a three-masted schooner, geishas, Swedish coat of arms, flags. Arms: Common place for emblems of a suitable type.

Over deltoid muscles sometimes a lion or a tiger's head. Hands: Dates, names, initials, "true love", anchors and spots. Thigh: Sometimes a pistol and pictures similar to those on the arms but larger. Feet: Butterflies or birds. Abdomen: difficult to tattoo because of the loose skin that is difficult to stretch. Back and gluteal region: Often the only area that is not tattooed. Face: Blue or red stars on the forehead and anchors on the ears are uncommon in Sweden.

The removal of tattoos

Doctors are sometimes called on to remove unwanted professional tattoos or accidental implantation of pigment into the skin [54, 62, 96]. To remove tattoos has always been of interest and the Romans maintained a class of physicians, who specialised in the removal of tattoos, considered as badges of degradation, from successful gladiators and slaves, who were granted their freedom [14, 23]. People wish to have tattoos removed for various reasons, i.e. medical indications (mercurial sensitivity), religious motivations (Jews tattooed by the nazis) or because they regret having been tattooed [87].

Methods used for removal of tattoos. Chemicals: Carbolic acid, nitric acid, sulphuric acid, liquid ammonia, silver nitrate, salicylic acid, colloidin, counter tattoos with zinc chloride, tannic acid or silver nitrate, etc. These methods depend on the exfoliation of the skin containing the pigment, and are difficult to control, regarding depth, for example, and bad results are common [54, 87]. Physical agents: Finsen light to fade tattoos, injection of boiling water into the skin, scalding with steam, application of carbon dioxide, electrocoagulation. Surgical methods: Excision and primary closure, gradual and partial excision, sandpaper and a revolving wire brush. Unfortunately the skin on the arms and forearms is not loose and does not lend itself to the surgical methods. Scars following these methods are not uncommon and there is a tendency to hyperpigmentation [87].

A detailed description of the investigation and compilation of skin and rheumatic diseases, including tattoos, is given in a special report [46].

The Collection of Data

Population investigated. The skin and joints were routinely examined for the presence of a limited number of defined skin and rheumatic diseases in a total general population of 39,571 persons over the age of seven, or fourteen, in Sweden. The populations were distributed over the following geographical areas: 8,897 persons (3,916 males, 4,981 females) in the county of Norrbotten (central town of Luleå); 3,302 persons (1,662 males, 1,640 females) in the county of Jämtland (rural districts of Frostviken and Ström); 10,465 persons (5,258 males, 5,207 females) in the county of Skaraborg—tattooing was only investigated among 5,046 persons—the town of Hjo, and the rural districts of Tived and Finnerödja; 12,669 persons (6,184 males, 6,485 females) in the county of Kristianstad (the town of Simrishamn, the rural districts of Barkåkra, Förslovsholm, Skalderviken and the municipality of Båstad). In addition certain special populations were investigated: 1,298 steel-workers (Norrbotten), 99 prisoners (Jämtland), 153 construction workers (Tunnsjöen, Norway), 825 males aged 18 undergoing medical examination on enlistment (the counties of Örebro and Västmanland), 721 males in the defence forces refresher training (county of Kristianstad). 165 children (93 boys and 72 girls) under the age of seven, randomly selected are included in figures above (Luleå, Norrbotten). Among the non-response in Norrbotten and Kristianstad 353 and 789 persons respectively, randomly selected, were investigated. Tattoos were not surveyed in Tibro (Skaraborg) and population on which tattoos was calculated was thus 34,152 persons. Figure 1.

The distance between the northernmost and southernmost area was about 1,500 km and the areas were about 150-650 km apart north to south.

The time schedule for the primary investigations was: Skaraborg: January-May 1961; Jämtland: May-June 1961; Norrbotten: January-May 1962; Kristianstad: May-June 1962. *Re-investigations:* Norrbotten: April 1963; Kristianstad: May 1963.

Table 11. Marital status among 385 tattooed persons and 385 randomly selected non-tattooed persons matched as to age, sex, occupation and geographical area.

Region in the county of	Married		Unmarried		Widowed person		Divorced	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Norrbotnen	148	138	37	47	8	11	7	4
Jämtland	26	26	9	9	2	2	0	0
Skaraborg	85	78	18	31	8	13	2	1
Kristianstad (Vebystrand)	25	16	7	14	2	4	1	1

(1) Tattooed. (2) Not tattooed.

investigation due to the fact of travel involved in their work, e.g. sailors. It might be suspected that just those persons in these occupational groups are more often tattooed than any others. There was no reason to believe that people hesitated to be examined due to tattoos on their bodies. Random sampling of the prevalence of tattooing in occupational groups was performed in Norrbotten and Kristianstad to try to estimate the prevalence among the non-response group. The prevalence in the non-response group was double that of those primarily investigated, in males. The occupational distribution of the non-response might be the reason for this.

SOCIAL STATUS

The marital status amongst tattooed persons was also investigated. At certain socio-economic levels in the U.S.A. the incidence of tattoos varied between 9 to 65% [116].

In the present series, to find out if tattooed persons had a different marital status than in the non-tattooed group, 385 tattooed persons were compared with the same number of randomly selected, non-tattooed persons, matched as to sex, age, occupation and geographical area (Table 11).

The frequency of married, unmarried, widowed or divorced persons did not significantly differ in the tattooed and the non-tattooed groups.

The marital status of those grouped into five year groups by age was also investigated in tattooed and non-tattooed persons. Neither were there any differences in the marital status in these age groups.

PART II

ASSOCIATION BETWEEN TATTOOS AND SKIN AND RHEUMATIC DISEASES

Another aim of this investigation was to find out if any skin or rheumatic diseases were more frequent among tattooed than amongst non-tattooed people, i.e. to try to show a mathematical association between tattooing and skin and rheumatic diseases.

As the persons over the age of seven (Norrbotnen over the age of 14), within the areas selected were examined naked in the investigation of tattooing and about 100 skin and 15 rheumatic diseases as previously defined, it was possible to investigate any such possible association.

To find out if there was any mathematical association between tattooings and any skin or rheumatic diseases, 877 tattooed persons from the populations investigated were matched with an equal number of randomly selected non-tattooed controls of the same sex, age and occupation and from the same geographical area as the tattooed persons. The frequency of the other skin and rheumatic diseases surveyed was investigated in both groups. The differences in the ratios of the diseases were then tested by the chi-square test, level of significance 0.05. In those cases where significant differences were found, these primarily were the existence of a mathematical association, but it was not probable to show any pathogenetic or etiological association.

MAGICAL, MEDICINAL AND COSMETIC TATTOOS

Literature: Ancient tribal customs of Asia, Africa and the adjacent islands include disfiguration of the skin for medicinal purpose as illustrated by the following examples: The Arabs used to place design of small birds at the corners of the eyes to improve the sight and marks over the nose to protect it from injury and they also used tattoos to cure itching [23, 57]. In North Africa, notably in Tunis and Morocco, a fish tattooed was regarded as a good sign, as it was also among the early Christians, and was thought to protect women who were left alone, from the unwelcome attentions of strangers. A pattern of even a single dot applied at a place of injury was considered as a good method

of making it heal faster. Eye diseases, headaches, rheumatism and colds were also treated in this manner [36]. From Egypt have been reported 60 cases of migraine "successfully treated" by tattooing, as well as neuralgias, disease of the stomach, skin diseases, tumours and vitiligo [57]. "Good results" in joint diseases have been achieved by tattooing, special patterns on the skin over the joint concerned [57]. Swedish sailors used to think that tattooing was a protection against rheumatism [51]. Dots tattooed near the nostrils were considered in Egypt, even in modern times, to cure toothache [57]. Among Nigerians, marks on the body were used to cure pains in the stomach. In India, tattooing for example over the deltoid muscles relieved pain caused by dislocation, and tattooing on the forehead, chest or neck was thought to cure convulsions in children and over the pubis to cure stomach ache [43]. North American Indians cut their skin to let out "evil spirits". Also by Indians of the Amazon and American Negroes it was used to alleviate pain of any kind [43]. In Polynesia scarification was performed to "let out" headaches.

There seems to be a distinction between the body markings to cure pain in Africa, Samoa and Australia and those of the Hindus, Burmese, Kayans and Andaman Islanders. In the first group the cure seems not to lie in the mark, which is merely incidental to the cure. In the second group the body marks are regarded as an essential part of the magical cure [43].

Tattooing has nowadays been proved to be a valuable procedure in the treatment of certain diseases. Capillary hemangiomas, naevus flammeus, have been treated by tattooing not only from the cosmetic aspect, as a permanent camouflage but also from the improved psychological and social adjustment of the patient. [30, 48]. Skin-coloured pigment is deposited above the dilated capillaries to cover the port-wine stain. Tattooing has also been used for camouflaging corneal scars. The tattooing of skin transplants, by pedicle flap, or as a free graft, to achieve a colour match on the face, is a useful adjunct to plastic surgery [23]. Tattooing has been used therapeutically to relieve symptoms of pruritus ani by using mercuric sulphide [111]. During the Second World War many American soldiers had their blood group tattooed inconspicuously near the armpit, making absolutely certain that no mishap might occur in the case of a hurried emergency blood transfusion [36].

MEDICAL COMPLICATIONS

Literature: Reports indicate that serious complications can result from tattooing due in a large degree to the methods employed, and the precautions

used to prevent infection during and after the operation. These complications have drawn the attention of the dermatologists and the high incidence of tattooing among men in their second and third decades serves to alert the physician to the possibility of medical complications of tattoos in these age groups.

The present day prevalence of complications in the population can only be guessed. Serious pathological consequences of tattooing seem to be rather rare compared with the great number of people being tattooed [70], but probably many mild infections are never reported because the tattooed man is already ashamed of his new decoration. The number of reports of infections due for example to tattooing are small, primarily because proper methods for reporting such occurrences do not exist [121]. Different authors [70, 8, 31, 72, 89] have attempted to categorise the various types of tattoo complications and fundamentally there are five different types of reactions, due either to the tattooing process or to the deposition of foreign material.

Systemic or Localized Diseases Transmitted by Tattooing

Tattoo needles can remain infected and the bottle of dyes subsequently become infected. Needles can withstand the normal methods suitable for bacterial sterilisation [50]. Sterility tests performed on the dyes employed in tattooing have shown the dyes to be bacteriologically contaminated, but a sterility test performed on a modern tattooing apparatus on the other hand, was found to be sterile in one investigation [121]. As old-time tattoo artists used their own sputum to mix the pigments, wet the needle and rub the tattooed area and as often no attempt was made to sterilise the needles between the customers, it is no wonder that infectious diseases have been documented as caused by tattooing in certain cases [87].

Syphilis. Primary syphilitic chancres or secondary luetic lesions were observed in 47 cases as a complication following tattooing in 1869. 29 had severe infections and 8 died [11]. It has been observed that syphilitic lesions do not appear in the red part of the tattoos because mercuric sulphide, which is toxic to the spirochæte, is used as the red pigment [10, 23, 33], but many cases of syphilis have, however, been transmitted through tattooing [10, 27, 34, 52, 63, 70, 75, 91, 110].

Tuberculosis, especially localised, inoculated tuberculosis [29], tuberculosis cutis verrucosa, has been transmitted [26, 86] and has also given rise to miliary tuberculosis in predisposed persons [85, 86]. Tuberculous granulomas have been observed in tattoos rubbed with infected milk [23].

Leprosy has been described as appearing in tattoos [1, 23, 84].

Tetanus has been transmitted by tattooing [79].

Impetigo, ectyema, erysipelas, furunculosis, abscesses, phlegmons and septicaemia are examples of pyogenic infections that have been documented as being tattoo induced [11, 13, 26, 85, 86, 91, 96, 116, 120, 121]. Secondary infections in tattooing have sometimes been observed and have led to gangrene [47, 68] and amputations from infections have been described, some of them being fatal [60].

Vaccinia has been documented as tattoo induced in one case [120] and *herpes zoster* in another [116].

Verrucae vulgaris has been reported as a Koebner phenomenon in tattooing, where the needle seems to have served as a transmitter of the virus of verrucae vulgaris [82, 115, 116].

Molluscum contagiosum transmitted by tattooing has also been described [39].

Infective hepatitis caused by the viable virus of serum hepatitis, transmitted from one customer to another by the tattooing procedure has been reported. Among American Service personnel, 18 out of 26 cases of infective hepatitis had been tattooed 49-154 days before the onset of symptoms, whereas only 61 out of 200 non-hepatic "control" cases had been tattooed; 69% of the hepatitis cases and 30% of the controls respectively represents significant difference [99]. Four hepatitis cases inoculated with the virus of homologous serum jaundice at the time of being tattooed are described. It seems to be reasonable to conclude that these four ratings were inoculated with the virus [87]. In a British Military Hospital in Germany in 1947, a medical officer observed with regards to the incidence of tattooing in cases of infective hepatitis, that among 10 cases admitted during one week, six were found to have been tattooed on the same day and by the same artist, not more than four months before [88]. In a military hospital in Hongkong, 143 cases of viral hepatitis were treated, and from these 56 (39.1%) were tattooed 51-150 days before the onset of the symptoms, as against 16 (10.5%) of 152 control cases in the same hospital. The differences between the number of cases of viral hepatitis tattooed before the onset of symptoms and the control cases was statistically significant, and it was probable that the virus of hepatitis had been transmitted by the tattooing procedure [50].

Sensitivity Reactions

Allergic sensitisation sometimes develops in the skin to the colours introduced and many different types of allergic reactions, giving rise to a

localised generalised dermatitis or at the site of the tattoo, have been recorded. The onset is often spontaneous and no exciting factor has been found. True sensitisation to colours containing sulphides or mercury, cobalt and chromium has been described.

Red pigments. Sulphides of mercury, cinnabar, also known as vermilion or Chinese red, in the red area of tattoos often give rise to allergic eczema [85, 102]. Allergy towards the sulphides of mercury contained in cinnabar has been described by many authors [3, 7, 8, 31, 34, 85, 103, 105, 113, 114]. Sulphathiazol sensitivity in the cinnabar "area" of a tattoo has also been described [5]. The dermatitis is manifested by swelling, itching and severe irritation localised to the red area, and weeping eczematous reactions and mercurial granulomas may develop [23]. Occasionally the use of mercurial preparations elsewhere on the skin, or taken internally, have induced a violent hypersensitive reaction in the red area of the tattoo, which subsequently has become swollen [114]. Usually there is a latent period from the time of tattooing until the symptoms develop, but in one case described [72a] the red area remained raised, crusted and pruritic from the time the tattoo was performed, and the initial reaction failed to subside. In most cases, sensitivity to cinnabar develops spontaneously. In one case described, the patient had no contact with mercury other than the colour of the tattoo, and in addition to the local eczematous response, widespread eruptions developed, but which quickly responded to the injection of dimercaprol [56]. An allergic sensitisation to cinnabar may thus develop [6, 7, 24, 70, 72a, 76, 79, 103, 114]. Several of the patients with allergic eczemas from the mercury in tattoos show positive patch tests with mercury. Patch tests, however, sometimes give conflicting results [89] and in spite of the fact that mercury is a common skin sensitising agent, allergy of the skin to the dyes in the tattoos is relatively rare [70].

Green pigments. Chromium used for the green pigment, sometimes gives rise to allergic reactions in tattoos, a chromium type of sensitisation dermatitis and the reaction seems to be similar to the mercurial type. Epicutaneous testing with chrome has given positive results in some cases [16a, 20, 45]. From nine patients with green tattoo reactions, all where men between the age of 28-61 years and all had developed eczemas at sites other than those tattooed, except one man, who had dermatitis herpetiformis. Two had atopic eczema, two had contact dermatitis from chromates and four from cement [16a, 20, 21, 45, 67, 90]. Chromate sensitivity has been shown to be responsible for both the cement dermatitis and tattoo reactions [24].

Yellow pigments. Urticarial reactions to sunlight in the yellow portion of

the tattoos have been described [36, 106]. Of 24 patients with yellow tattoos, 18 observed a swelling reaction in them when they were exposed to sunlight [17].

Blue pigment (Cobalt blue) may give allergic reactions to cobalt [16b].

Predisposition of Skin Areas for Various Skin Diseases

The development of *locus minoris resistentiae*, or the alteration of the area in some way so that it is predisposed to the localisation of various skin diseases, has been described. It is, however, surprising, that tattoos seldom act as a focus of lowered resistance for the localisation of cutaneous diseases [70].

Lupus erythematosus chronicus. Eruptions of discoid lupus erythematosus have been observed in the red area of a tattoo on the forearm of a patient. Sulphides of mercury is a photosensitising agent and was believed to explain the localisation of the eruption in this case. The eruption was noticed soon after the tattooing was done and it persisted for seven years [70]. In another case, a man aged 36, lupus erythematosus developed simultaneously on the face and in the red area of a tattoo. The disease flushed up on exposure to sunlight [72b]. In a third case of lupus erythematosus chronicus, it was considered doubtful whether the appearance of the disease should be regarded as an isomorphic phenomenon or hypersensitivity to mercury as the causative factor [89].

Psoriasis is reported to develop in tattoos but shows no predilection for any colour [83]. The tendency for psoriasis to develop at any point of trauma or chronic inflammation is well known, and is called the Koebner phenomenon [83, 85, 89], and psoriasis induced by tattooing in this way has been described.

Lichen planus also has a tendency to react with the Koebner isomorphic phenomenon and the disease has been observed in tattoos [85, 89].

Immediate Inflammation Reactions in Tattoos

Immediate inflammatory reactions are commonly seen in tattoos. It is an acute, constant, inflammatory reaction associated with physical tissue injury and usually subsides within two to three weeks. The skin reaction developing in the tattooing procedure is often followed by secondary infections [72a].

Foreign-body-like Reactions and Malignancy in Tattoos

In this group are included miscellaneous and unusual foreign-body-like reactions. It is surprising that foreign body granulomas in tattoos are so rare, with consideration to the wide diversity of material being introduced by the process.

Keloid in the red areas of tattoos, caused by the tattoo [9, 117] or after the removal of a tattoo [28] has been described and in African negroes these keloids are particularly large.

Sarcoid reactions in tattoos have been documented [70, 72a, 80, 89]. One case of Boeck's sarcoid a cutaneous eruption limited solely to the tattooed area of the body was reported. It involved all the various colours of the tattoo and the cutaneous eruption was a single manifestation of generalised sarcoidosis [70, 72a] and histological examination showed a sarcoid type of reaction. The nodules on the tattoo had been present for seven years [72a]. This case is comparable with one other reported case, where sarcoid lesions developed at the sites of reaction due to accidental implantation of foreign particles [89]. Sarcoid and non-sarcoid types of foreign body granulomata have been found to occur in adjacent, clinically identical, lesions. The association between the dermal granulomas and epidermal eczematous allergic reactions was noted [67]. *Granulomata* in green and red tattoos, i.e. chromium and mercurial granulomata, have been described [21, 65], as have also unusual granulomatous formation in tattoos due to cinnabar used for medical purposes [85]. A very large mercurial granuloma, histologically investigated, has been reported, in which there was no evidence of malignancy [65]. A granulomatous reaction on the forearm of a male patient has been described, where the reaction was confined to the red portion of the tattoo, produced by cinnabar. Positive skin reactions were obtained in patch tests with cinnabar and mercurial preparations, and the granuloma reaction was thought to be due to an allergic hypersensitivity to mercury [41].

Reticular sarcoma in a blue tattoo design developed as a firm tumor, on a man aged 33, tattooed seventeen years before. Histological examination proved the diagnosis to be reticular sarcoma, containing pigment [4].

Malignant melanoma in a tattoo has been described [95].

Pre-cancerous cornified papillomata have been observed in the red-stained tattoo mark on the right upper arm of a man [49]. A non-malignant papillomata in a tattoo has also been described [73]. *Squamous-cell carcinoma* arising in a tattoo has been observed [71].

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THE HISTORY OF TATTOOING AND ITS SIGNIFICANCE.

WITH SOME ACCOUNT OF OTHER
FORMS OF CORPORAL MARKING

BY
W. D. HAMBLY, B.Sc. (Oxon.)
*Defunct Diploma Anthropology, Anthropologist to the
Wellcome Expedition to the Sudan
Author of "Native Races of the British Empire," etc.*

WITH NUMEROUS PHOTOGRAPHS
TEXT FIGURES AND A MAP

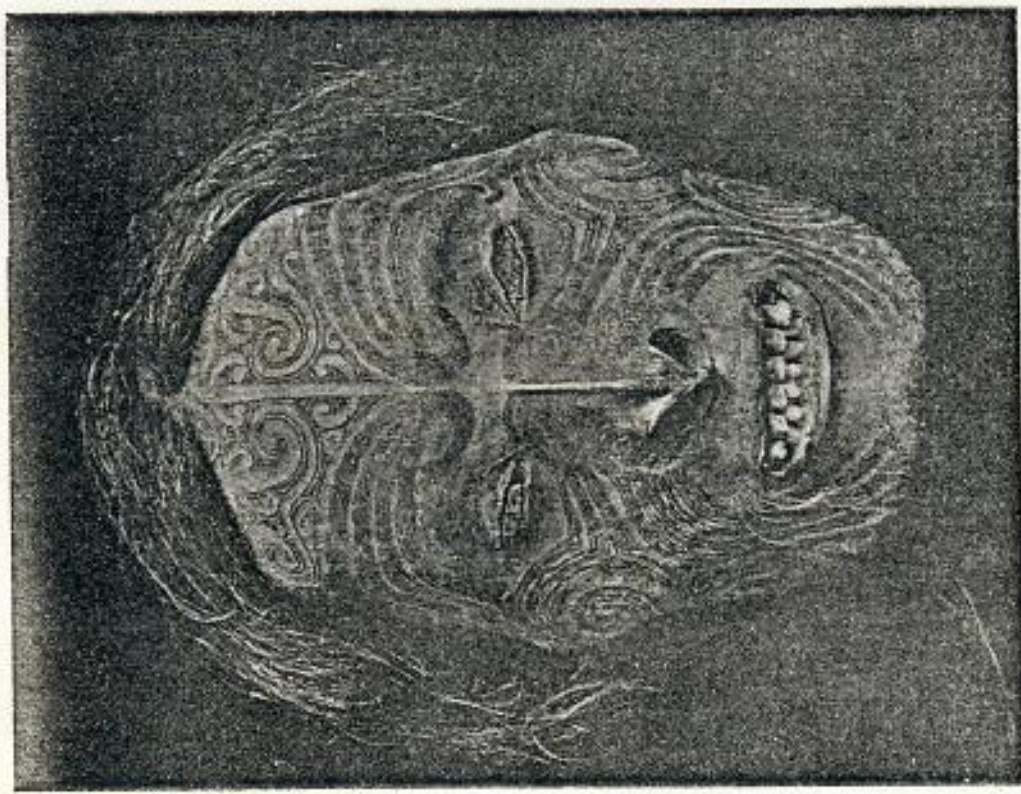
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MOKO TATTOO, NEW ZEALAND.

(Frontispiece.)

should desire to bring away with them some permanent impression of the artistic skill of a Burmese tattooer, whose dexterity has been the admiration of many Europeans who themselves have received tattoo designs. Of examples of animal markings among the Burmese there is no lack, but the designs are merely ornamental and have no special significance. It is quite possible that although the aesthetic impulses account for the bulk of tattooing done in Burma, there is a special significance attached to marking with a portrait of the cat or tiger.

On the subject of tattoo designs in Burma, Mr. Sinclair wrote to Sir H. H. Risley, who, among much interesting information, stated that a Burmese who adopts the picture of a cat or tiger as his body design does so in order to secure the stealth and agility of that animal.¹

Animal Markings in the Pacific

The last few years have witnessed much inquiry in the Pacific area, and none is more worthy of attention than that carried out by the Cambridge Expedition to Torres Strait, undertaken in 1898.² Among the islands in this area are many plant, animal, and geometric designs which are classified as social, commemorative, mourning, magical, and decorative. From some of the information given to Drs. Rivers and Haddon it appears that the animal

¹ "American Anthropologist," 1908, Vol. X, p. 36r.

² "Cambridge Expedition to Torres Strait," Vol. IV, pp. 13, 29; Vol. V, Plates IX and X.



*Stinging ray
Totemic mark.*

Dog Totem Marks



Totemic Design of Turtle Clan.



*Totemic Animal Designs used as Property and Body Marks
by the Islanders of Torres Strait.*

emblems are evidence of a decadent totemism, though this is not necessarily the case.¹

Among the totemic Western islanders some of the cicatrized marks represent a totemic animal, either realistically or in a conventional manner. The crocodile is a favourite animal and is usually represented by a mark scarred on the abdomen in imitation of the creature's scaly covering. Most of the islanders of Torres Strait have a neatly constructed oval and slightly raised scar on the right shoulder, and judging from the shape of the design, and information given, the scar represents a turtle.

The Miriam women cicatrized on the upper arm a figure of the centipede, while the Sam people employed the badge of the cassowary totem. The people desiring to show connection with this bird marked the calves of their legs with a symbolical design representing the print left by the foot of the cassowary. This marking was employed chiefly by women of the cassowary totem. The men claimed very distinct advantages from their alliance with the bird mentioned, and as subsidiary totems they had the snake and dugong. Men of the cassowary totem were reputed to be very fast runners, who prided themselves on their long, thin legs, which they likened to those of a cassowary. When a fight was imminent a Sam man would say to himself: "My legs are long and thin, I can run and not feel tired, my legs will go quickly, and the grass will not entangle them."²

The Tabu people liken themselves to their

¹ D. Jenness and A. Ballantyne, "The Northern D'Entrecasteaux," 1920, p. 54.

² "Cambridge Expedition," p. 166.

totemic animal, the snake, by making two small holes at the tip of the nose to represent that animal, and among the Mabuag men there is reported to be a marking of a coiled snake on the calf of the leg. This design is employed only by the Tabu clan, who claim the snake as a totemic animal, seeking, as before stated, to ally themselves with the creature by making two holes at the tip of the nose, and wagging their protruding tongues in battle.¹

In Kiwai Island, at the mouth of the Fly River, New Guinea, the favourite totems include the cat sign, the cassowary, bamboo and crab, and out of a total of thirty-six totems observed, thirty-one were animals, two plants, and three inanimate objects. Of the fifteen totems in Kiwai, four are animals, ten are plants, and one is an inanimate object, but in all cases of representation on the body the designs were so conventionalized as to be recognized only with difficulty.²

The Torres Strait Islander has a very definite idea of his alliance with the totem animal, and a man is supposed to live up to the character of the creature whose design is cicatrized on him. "Augud (i.e., totemic animal), all same as relation, he belong same family," and so the cassowary men are of uncertain temper and kick with extreme violence. A Kodjal man belonging to the crocodile totem would be cruel and relentless, and if a member of this totem killed a crocodile his fellows would inflict the death penalty on him, but a member of any other clan might kill a crocodile without having to suffer; the Kodjal men

¹ "Cambridge Expedition," p. 168.

² *Ibid.*, Vol. V, p. 154.

would mourn for their relative, but no violence would take place. If a Umai man killed a dog his fellow clansmen would fight him, but if the dog was killed by a member of another clan they would merely feel sorry. An Umai man, when going to fight, secures good luck and makes himself distinguishable from his enemies by painting his totem on his back and chest. He has, however, no permanent totemic mark.¹

The centipede was a favourite design of the Daudai women, who carried it upon their legs, but there is no evidence of a centipede totem, and probably the mark, like the similar one of the Dómbis of India,² is a magical protection against the bites of these creatures. A very good instance of body marking with a botanical totemic design was found on a young woman of the cocoanut tree totem, at Mauwata, New Guinea.

According to Mr. Somerville's statement the men of New Georgia mark themselves with a raised cicatrix in the form of a frigate bird or porpoise, and some individuals employ the two markings.³ The shoulder blade, breast, and thigh are most frequently marked, the thigh being the favourite part for an impression of the porpoise, and the shoulder blade for the sign of the frigate bird. This convention seems to be for the purpose of giving to the marked limb the qualities possessed by the animal whose form is represented. Thus, the shoulders are impressed with the marking of the frigate bird in the hope that the man will have in his arms the enormous wing strength of this bird.

¹ "Cambridge Expedition," Vol. V, pp. 183-5, 188.

² "Man," 1902.

³ J.A.I., 1897, Vol. XXVI, p. 365.



Similarly the legs are marked with the representation of a porpoise in order to make them strong in swimming. Marquardt discusses Von Luschan's suggestion that the Samoan design is of totemic origin, being a conventional representation of the sea eagle which might have been revered. He does not, however, find corroboration of such a theory.¹

Of body marking with animal designs in New Zealand there does not appear to be any trace, and the geometric devices applied are to be considered as a means of conferring a social distinction.

For Australia there is no lack of evidence to show that totemic markings are made on the body at "intichiuma" and other ceremonies, but the photos appearing in the recent work of Messrs. Spencer and Gillen show that the designs are so highly conventionalized as to be unrecognizable, with the exception perhaps of a few men painted with a mark evidently intended as a representation of the sun.² At the annual ceremony for causing the kangaroos to flourish and multiply, men of the kangaroo totem of the Arunta tribe resort to a water hole where there is a huge rock, standing some twenty feet out of the ground, and on to the surface of this rock there is a projecting ledge capable of accommodating three or four men who lead the ceremony. These individuals paint their bodies with alternate red and yellow stripes, which are a very crude imitation of the kangaroo's form; this being done in order to become *en rapport* with the kangaroos. The men mount the ledge of rock and allow blood to stream from their arms down

¹ "Die Tätowierung in Samoa," 1899, pp. 17-19.

² "Across Australia," Spencer and Gillen, pp. 288 *et seq.*

the surface of the cliff, while their companions below sing of the proposed increase of kangaroos.

There is a hunt, a sacrificial meal, a second hunt, a second meal and more singing, after which all disperse. In this instance the body marking is made in order to assimilate the wearers with the kangaroo spirits who are the mythical human ancestors of the totemites. What is more important, these semi-human, semi-kangaroo spirits are responsible for the fecundity of the animal in question, and it is thought that their power will not be exerted unless the totemite appeals to and propitiates them by body marking, singing, and elaborate ceremonial.¹

Spencer and Gillen give a very interesting case of the young men of many totems assembling for the purpose of exchanging designs, and although no explanation is given it seems very probable that this "give and take" arrangement is intended to secure for each man the sum total of spiritual force hidden in the totems taken collectively.

A has the goodness from his totem, then hands it on to B who repays his kindness in like manner, and so each receives the greatest possible amount of spiritual force. In addition the men show by this employment of totemic designs that there may be differences of clans and their accompanying totems, but in reality the people meeting together are united in a larger social unit.²

¹ "Across Australia," Spencer and Gillen, p. 97.

² *Ibid.*, p. 288.

round. The Bacchante wore faun-skin sandals on her feet, and was further identified with the animal by the design of a faun stamped on her arm.

Egyptian archaeology provides an interesting example of the assumption of body marks to denote alliance between the human and divine. Libyan figures from the tomb of Seti I (1330 B.C.) show tattooed symbols of the goddess Neith,¹ a deity of remote antiquity who was well known by the Fourth Dynasty. Neith was thought to be mother and daughter of the sun god Re. She was responsible for the rebirth of the sun each morning, had a function in connection with the dressing of the dead, and was concerned with their immortal preservation. Budge states that the doctrine of parthenogenesis was well known in Egypt in connection with the goddess Neith of Sais, hence there would appear to be an early, probably the earliest, historical example of the tattooers' craft providing an alliance with spiritual forces.

Our regional survey of body marking in connection with totemism makes two points quite clear:

(1) That there is marking which definitely allies the wearer with the spirit parts of the animal, as in Australia, North America, and the islands of Torres Strait.

(2) There is a special kind of marking with animal designs having no apparent connection with the religious beliefs of totemic peoples. Many of the marks assumed must be regarded as magico-religious designs, as for example, in Torres Strait, where there is a cassowary totem, and alliance with

¹ This work, p. 105.

the bird is obtained by applying a device to the body. In every instance of body marking in the Torres Strait the idea of using magical means of obtaining animal qualities seems to be uppermost. So it is in Burma with men who employ the tiger mark, or in New Georgia where the signs of porpoise and frigate bird are the favourites, or again, in India where the marking with animals is magical and ornamental. There is, however, in spite of the confusion of reasons for applying plant and animal marking, very good ground for believing that in Australia, and not long ago in North America, these body designs had a significance which was something more than vaguely magical. They were perhaps akin to an expression of religious feeling, which in North America and Australia is characterized by ideas connecting the spirit life of tribal ancestors and animals. This evidence adduced with regard to various types of body marking relates to acts and thought processes usually associated with the word religion. In the instances detailed body marking relates to a divine personality, or to a future life with preservation of identity. Taboos and ritual, legends of divine origin, and a tendency for the tattooer's craft to be in sacerdotal hands, prove a strong religious impulse of the kind necessary to disperse and preserve body marking processes throughout the world.

As a general proposition it may be truly said that body marking has played a most important part in the evolution, stabilization, and migration of religious concepts. Probably these had their inception in far-off palæolithic days when red ochre was used to

Omaha girl was mentioned, as an instance which exemplified the importance of ceremonial, which in this particular case has reference to the life-giving power of the sun, treated as a deity whose symbol is painted upon the worshipper. The whole process is accompanied by singing, which bears reference to the sun's ascent to the zenith and the descent of spiritual power upon the one receiving the tattooed symbol. There is a distinct deification of day and night, and a concrete representation of these cosmic forces by a tattooed sun and star. In Aztec religious ceremonies too, corporal marking had a dedicatory and initiatory significance.

The subject of marking the body with animal or plant designs may be classed along with the section on marking as an expression of moral and religious sentiments. These arise from primitive man's contemplation of the spiritual aspect of animal life, an aspect which he identifies with the spirit parts of his own progenitors, and so body marking with totemic emblems is part of a form of ancestor worship. In North America marking is usually carried out according to the directions of a dream vision, and designs representing the individual totem of the wearer act as guardian spirits. Examples of body marking with an animal design, in Africa, were found to be rare, the two most recent examples being from Nigeria, where a conventionalized lizard design was employed to attract women; but there is little evidence of totemic marking being employed.¹ For India there are examples of the adoption of a design such as the scorpion, but little significance beyond a charm against

¹ J.A.I., 1911, pp. 162-71.

the bite of the creature is claimed, and for Burma, the employment of the animal form in body marks is almost entirely æsthetic and amuletic. Islanders of Torres Strait employ both marks of plants and animals, which are engraved on the body by cicatrization, the designs including the representation of the centipede, snake, turtle, cassowary and coconut palm. There is little room for doubt that many of these marks have a totemic significance, which is, however, very rapidly on the decline. Aboriginal tribes of Australia freely employ totemic marks, which are highly conventionalized representations of some animal, plant, heavenly body, or even an inanimate object.¹ The marking is evidently carried out partly by way of compliment to the spiritual parts of ancestors residing in the totemic animals, and to a great extent with a view to gaining for the wearer all the qualities of the totemic animal; for example, stealth, speed, and cunning, which might prove useful in the struggle for existence. Finally in connection with totemic markings, there has for the past few years been an application of anthropological principles to the study of life in ancient Greece, Rome, and Egypt, and there is some evidence to show that the body of a worshipper was marked with a religious symbol.

The commencement of a chapter on body marks, made as an important part of the magico-religious rites of primitive people, opened up an inquiry capable of an almost indefinite extension. When classified briefly, the uses of these marks are extended to such points as alleviation and prevention of sickness and pain, or as a guard against accident and unwelcome

¹ "Cambridge Expedition to Torres Strait," Vol. V.

original minds. The open question of the existence of a "gregarious instinct" does not necessarily form part of this discussion. For the purpose in view it suffices to show the manner in which body marks have contributed to growth of communal feeling.

Body marking of the family, tribal, clan, and totemic varieties, together with tattooed symbols of witches and secret societies, likewise the practice of smearing members of a dangerous expedition with the same colour, possibly with each other's blood, all show desire for concerted action and mutual help.

It is with this question of group formation and maintenance, also acquisition of social status and its preservation, that the present chapter deals. Marking of children during infancy may indicate a desire to distinguish them from the progeny of hostile neighbours. Andaman islanders commence cicatrizing their children at the age of eight years and complete the marks at puberty. In conversation with a missionary named Howell, who has spent some thirty years on the Congo, between the estuary and Stanley Falls, the point of decline of tribal markings was mentioned, and in viewing photographs of infants of nine or twelve months, he said that twenty years ago the child would have been marked with the tribal cicatrices at that age. Information from Torday and Joyce shows that the marking is frequently carried out during early childhood, but is not complete until puberty in some instances. "Chez les Banbala les incisions sont pratiquées pendant l'enfance, chez les tribus orientales des que l'enfant peut marcher ce sont les femmes qui pratiquent l'opération. Chez les Bangongo si la cicatrization

n'est pas complète quand le patient atteint l'âge de la puberté, elle reste inachevée, chez les Bengendi cependant elle peut être continuée."¹

Apparently in the Congo region of Africa the marking becomes more complex, and instead of being carried out at an initiation ceremony as among the Andamanese, or native Australian tribes of Port Lincoln, it is usually accomplished at the time the child begins to walk, so we seem to recede to a period when the child was identified with the family by permanent markings, as soon as there was a chance of his straying away. The employment of body marks to denote clans, totems, and families illustrates stages in the evolution of group consciousness and a sense of corporate existence. Occasionally, as in the Western Islands of Torres Strait, a man shows two marks, the one indicating connection with the father's group, the other with the mother's,² thus illustrating the interesting passage probably from mother right to father right. Lastly there is the individual mark, which shows that with the slow growth of self-consciousness, a man evolves an identity and positive self-emotion which requires some expression. So we find the man of New Georgia adopting the turtle or frigate bird as his emblem, or the North American Indian painting on his body a representation of his Manitou or guardian spirit. Dr. Howitt gives the marks which distinguish the clans of the Kurnai; Spencer and Gillen show totemic paintings on the backs of the Arunta people,

¹ Torday and Joyce, "Documents Ethnographiques du Congo Belge," 1910, p. 166.

² "Cambridge Expedition to Torres Strait," Vol. V. p. 168.

pride, pugnacity, and love of approbation which call for markings to distinguish the man who has shown skill in the chase.

The islanders of Torres Strait are distinguished by a large complicated oval scar only slightly raised and of neat construction. This design, which represents a turtle, occupies the right shoulder, and is occasionally repeated on the left.¹ It is probable that a young man was not allowed to bear a cicatrix until he had killed his first turtle or dugong. In modern times, among the maritime Chukchee, a man who has succeeded in killing his first whale, or polar bear, has a simple mark tattooed near every joint of his limbs.² Near Plover Bay the man whose ancestors had been great whale killers imprinted marks on a cover he owned; the design being representative of the flukes of the whale.³ An earlier report states that among the Point Barrow Eskimo those men who have been captains of whaling umiaks,⁴ and have taken whales, have somewhere on their persons marks to indicate these whaling exploits, while in particular cases the marks form an exact tally of the number of animals killed. For instance, "Anoru" had a broad band across each cheek from the corners of the mouth, made up of many indistinct lines, which were said to indicate many whales. Amaiyuna had the "flukes" of seven whales in a line across his chest, and another man had two small marks

¹ "Cambridge Expedition to Torres Strait," 1908, Vol. IV, p. 23.

² "Jesup Expedition to North Pacific," Vol. VII, p. 254.

³ A.B.E., 1896-7, Part I, p. 322.

⁴ *Ibid.*, 1887-8, p. 139.

on the forearm. Niaksara, the wife of Anoru, just mentioned for his whaling exploits, also had a little mark tattooed at each corner of her mouth, and these she said were "whale marks," indicating that she was the wife of a successful whale man—an interesting case of transferred honour not entirely unlike the instances of the North American warriors having war honours recorded by tattooing cosmic symbols on their daughters.

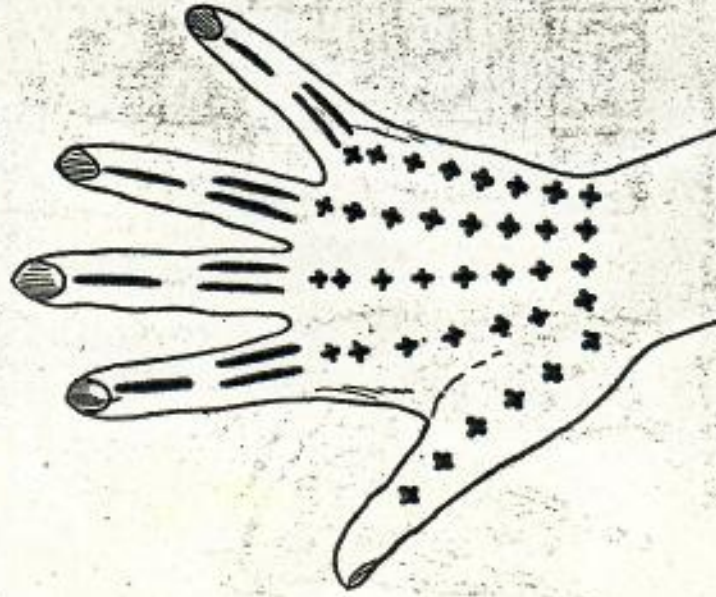
Marking of the Body on Admission to a Secret Society Illustrates the Anti-social Use of Tattooing

Few primitive people are unable to boast of the possession of a secret society into which the new members are initiated, often with abominable rites. And although in isolated instances such societies may punish evil-doers, they are in the main anti-social tyrannical organizations. West Africa is a hot bed of such institutions, and others are to be found in New Guinea and Melanesia generally, the "Duk Duk" being one of the most powerful. As membership of such a society is a title of respect, those who have been initiated sometimes adopt a particular body or facial mark which, on account of the power of the society, will not fail to induce in the tribesmen some degree of servility. Along with primitive secret societies can be considered any institutions which exist for purposes of brigandage, or the committal of political crimes.¹

At the initiation of a man into the Donga thieving

¹ "Primitive Secret Societies," H. Webster, New York, 1908. P

its exactness of outline, and still more remarkable for its persistence as an ornamental mark for women of the Liu Kiu Islands. In the "Cruise of the Marchesa," M. Guillemard mentions visiting the Liu Kiu Islands in 1883, and noting that the cross



Hand Tattooing of Samoan Women.

was a favourite design, also that the marks on the phalanges varied in extent with the age of the individual.¹ The entire hand tattoo is not completed until marriage. M. Guillemard states that the design he noticed in 1883 is exactly described in Beechey's "Narrative of a Voyage in the Pacific" (1827).²

¹ Compare with tattooed phalanges of Samoan women.

² "Cruise of Marchesa," Guillemard, p. 39.



TEKUNILLO WAHĀ; TATTOO MARKS ON FACE.



Tattooing
Needle
with
bone plate
and ink
(Taki)



WOODEN FIGURE FROM A MAORI CHIEF'S HOUSE; THE USUAL TATTOO OF A MAN.

(A and B show use of tattoo for decoration.)

NEW ZEALAND.

In approaching a short consideration of Maori Moko designs, we have to deal with the greatest proficiency in marking with geometrical figures, which were employed both by warriors who tattooed the entire face, and women who adopted lip and chin designs only. The most striking features in connection with Maori Moko are the perfect symmetry of individual marks, the balance of designs on right and left cheeks, and upper and lower lips, finally the minute accuracy of detail; for nowhere is there any trace of confusion, and it is evident that a master mind was at work thinking out, not only the size and intricacies of each mark, but in addition a clear conception of the finished product, and the relation of each part to the whole design.¹

With the Maoris, as also is the case among the Motu and Koita peoples of New Guinea, there is employment of body tattoo marks similar to those on objects of use and ornament. The Melanesians of British New Guinea were found to adopt the design from the beak of the hornbill, both for body marking and ornamenting posts of club-houses. Likewise with the Maoris, the spiral (which is the basis of all their ornament) is employed, not only in Moko, but extensively in ornamenting the posts of houses, prows of canoes, and the funnel from which a chief is fed during the tattooing operation.

The technique of the New Guinea markings suggests considerable practice before the designs were transferred to the body, but with reference to Maori markings, those on materials such as wood are almost, if not quite, as perfect as those on the individual.

¹ See Frontispiece.

One very interesting point in connection with Maori art, Moko and otherwise, is the fact that the spiral, whose underlying geometric principles and construction are very elaborate, should have been selected as a basis on which to build up complex ornament. To the artist's credit be it said that no more difficult geometrical figure could have been selected, especially when one takes into account the fact that no preliminary geometrical construction was employed. The artist simply traced the designs free-hand with black, then went over these with a small adze which had been dipped in red ochre. In addition to the employment of the spiral, the Maori artist used the parabolic curve, the involute of a circle, and the ionic involute. The geometrical construction of these figures is exceedingly complicated, and difficult to realize even with the use of a good set of mathematical instruments. So great must have been the skill of the artist, whose delicate co-ordination of hand and eye enabled him successfully to complete these designs freehand, that "Moko" at its best must be regarded as the acme of excellence in the geometrical stage of the evolution of the fine art of body marking. Major-General Robley says of the ornamentation of New Zealand women: "I have seen the arms and body so covered with powerful blue marks, that the women looked as if they had on them a tight-fitting figured chintz dress." No doubt the degree of beauty in ornament depended on the amount which the artist was likely to receive; and such a supposition is guaranteed by the lines:¹

¹ Robley, "Moko," p. 43.

" He who pays well, let him
Be beautifully ornamented,
But he who forgets the operator,
Let him be done carelessly,
Be the lines far apart."

Again by Ratzel's verse referring to the tattooer's art in Polynesia, the connection between skill and payment are illustrated.

" Every line be duly drawn
On the man whose rich and great
Shape your figures fair and straight,
On the man who cannot pay
Make them crooked, coarse and splay."²

C. Hose and W. McDougall³ mention the interruption of the tattooing process in order that the operator may begin bargaining, or receive an installment of the payment, and evidently there is good reason for thinking that not every pattern must be taken as an exposition of the degree of skill attained. The quality of the artist's work varies with the amount of remuneration given, and in addition to this difficulty in assessing values, there is that of deliberate conventionalizing of animal forms, as in Haida designs, which leave the critic in doubt respecting the artist's appreciation of animal outline.⁴ Social and religious conventions may be repulsive to naturalism and free development of observational power.

¹ "History of Mankind," 1896, Vol. I, p. 196.

² "Pagan Tribes of Borneo," Hose and McDougall, Vol. I, p. 252.

³ This work, p. 268.

Samoa Tattooing

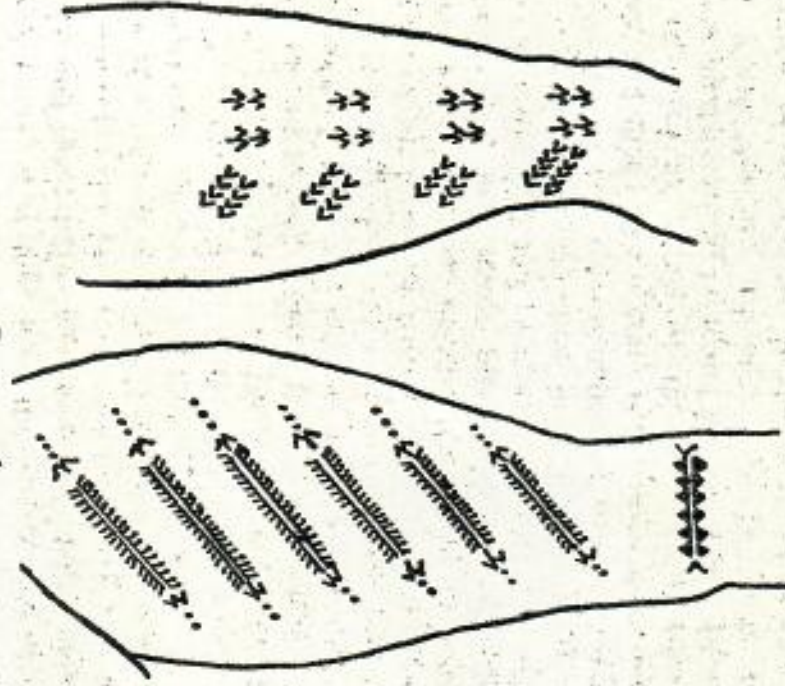
The art of Samoa is to be considered hardly inferior to that of New Zealand, and researches of M. Carl Marquardt show that tattooing is still extensively practised. The excellent illustrations given in "Die Tatowirung in Samoa"¹ justify the linking of the Samoan with the Maori tattooing as final units of an ascending evolutionary series of geometrical patterns. The Samoan art has not received the consideration which it deserves, because of the extreme reticence of those who practise it, and the fact that the most elaborate markings are covered by the loin cloth.

For the most part there is a symmetrical arrangement of lines, dots and crosses on the backs of the hands² to form zigzags and rhomboids, and at the back of each knee, where the operation is extremely painful, there is a finely-pointed star. The oblong, lozenge, triangle, and V-shaped marks are exceedingly well employed, sometimes in combination, as when the oblong is placed inside the rhomboid. The inner frontal aspect of the thighs shows a remarkable series of lines of frigate bird pattern which gradually converge as they approach the groin, and one mark peculiar to the Samoan designs is a kind of highly ornamental fish-hook carrying numerous barbs. Another mark is similar to our sign for denoting the Cardinal points, and so original

¹ "Die Tatowirung in Samoa," Carl Marquardt, p. 15.

² This work, p. 260.

is the tattooing in Samoa that it may almost be considered in a technological sense as an independent school of the body marking art.



Thigh Tattooing of Samoan Women.

For an account of the general effect of covering the human body with neatly executed designs, well correlated, and selected with a view to enhancing the naturally graceful curves of the figure, it would be difficult to find one more apt than given by Darwin.

Describing a native of Tahiti,³ the author says that the ornamental markings follow the curvature of

³ "A Voyage round the World," Darwin, p. 430.

the body so gracefully that they have a very elegant effect. One common pattern, which varies in detail with different individuals, is very like the crown of a palm tree; it springs from the central line of the back and gracefully curves round both sides.¹ Darwin concludes his description by saying that the body of a man so ornamented was like the trunk of a noble tree embraced by a delicate creeper.

There can be little doubt that most ornament results from observation of the work of nature, for it is difficult to realize that a man should conceive of a variety of geometric figures, quite spontaneously. It is more likely that such designs as he employs are suggested by forms of leaves, markings on plants, fruits, animals, birds, insects, the scales of fishes, spiral shells, and many other objects, exhibiting symmetrically disposed patterns of regular geometric form. If such postulation be true, the stage of geometric art is a representation of nature's handiwork, and those who operate along these lines must be regarded as pupils of the naturalistic school, whose masters are to be found in Burma and Japan. To North America reference may be made for examples of crude efforts in the portrayal of animal form. Haida animals² are too conventional and anthropomorphic to reveal a correct idea of skill, but in the cicatrized animal designs from Torres Strait³ there is obvious appreciation of natural animal outline. Christian speaks appreciatively of tattooed

¹ "Evolution of Decorative Art," H. Balfour, p. 26. "Adaptation of design to space available."

² This work, p. 268.

³ "Cambridge Expedition to Torres Strait," 1898, Vol. V, Plates IX, X.

animal forms in Anua, an island of the Paumotu. "The design is very beautiful and consists of faithfully rendered representations of sea urchins, quaint zoophytes, just like plates out of a naturalist's album."¹

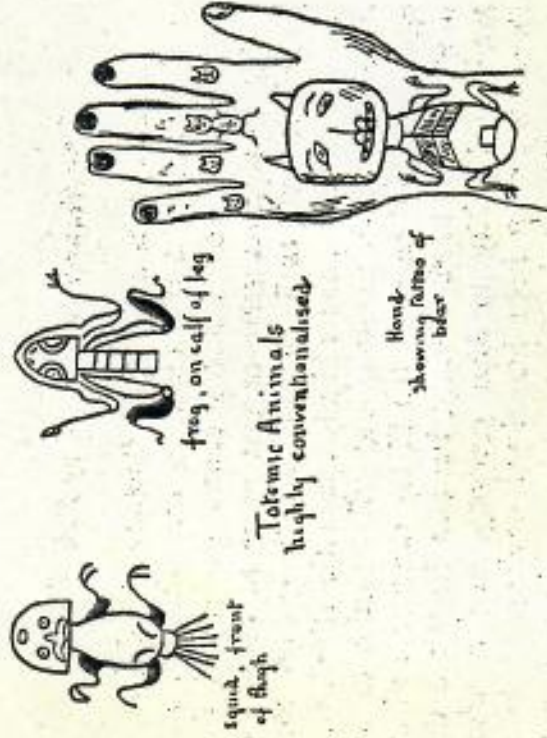
The Naturalistic School of Tattooing

In making an attempt to illustrate the development which has taken place in the naturalistic school, we might take the tattooed animal designs of the Haida as representative of that stage in which the portrait is quite easily recognized, although the outline is in some instances highly conventionalized, and there is absolutely no attempt at giving motion to the figures. The "bear" is too highly conventionalized to give a clue to his identity, but how far this is the result of inability to draw correctly, and to what extent it results from intentional deviation from a true likeness, it is difficult to say. The human attributes of the face are no doubt given, not because of inability faithfully to show a likeness of a bear, but by deliberate intention of the artist, who desired above all to indicate his alliance with the bear spirit, which like other animal spirits was anthropomorphically conceived. The frog is fairly easy to recognize; but again in the squid there is the human countenance which gives such a ludicrous result.

The efforts of the totemic islanders of Torres Strait display a considerable amount of skill in

¹ "Eastern Pacific Islands," F. W. Christian, 1910, p. 199.

giving in their cicatrized body marks, a correct outline of animal form.¹ In the case of two dogs facing one another, there is a moderately successful attempt at realism in showing this casual meeting of two animals, each of which appears to be watching with some caution the movements of the other.



Totemic Animals highly conventionalised

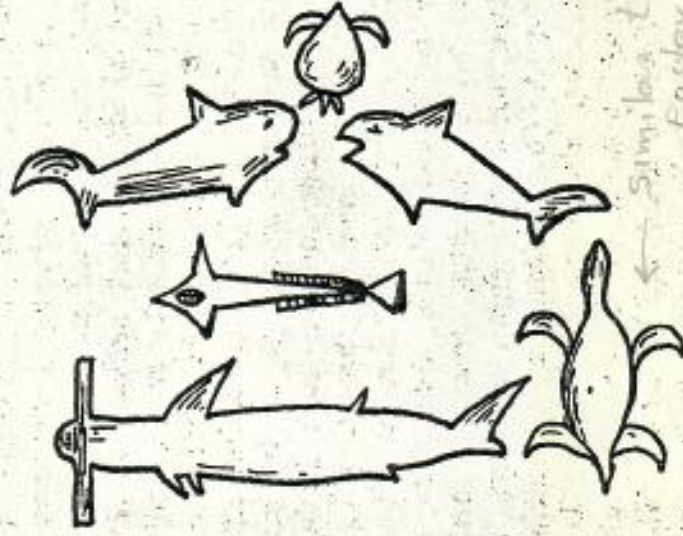
Tattoo Marks of the Haida Tribe, Queen Charlotte Islands, N.W. Canada.

The cassowary is fairly true in outline to the original it represents, but details will not bear close scrutiny; a remark which also applies to the representations of a turtle and a stinging ray, so well known in most Pacific waters. (See also p. 97.)

The designs of animals so far considered have been confined to cicatrized marks in Torres Strait

¹ "Cambridge Expedition to Torres Strait," Vol. V, Plates V, IX, X. Of these designs some are applied to the human body. Others appear only on drums and pipes.

(where the pattern is touched with red ochre on festive occasions), and tattoo by puncture among the Haida. Tamil markings are also of a simple nature, consisting of more or less realistic representations of animals, plants, and human beings in tattooed



Totemic Designs used by Islanders of Torres Strait.

puncture filled in with red or blue; some designs exhibit a combination of two colours. The tattooed designs of Burma and Japan, with their delicate variegated backgrounds of colour, are too complicated to represent in outline tracings, and for clear ideas concerning the products of the tattooers' art in India, Burma, and Japan, it is well to resort to descriptive passages from those who have made

Getting a Tattoo

CHICAGO — There comes a time in a man's life when he's got to make the decision: Is he going to get a tattoo or isn't he?

For me, the moment of truth had come finally. I realized that I could put it off no longer. It was time to be tattooed.

I've had the urge for as long as I



A Chicago tattoo artist says, for the Western world, 'tattooing got its start when Capt. Cook's sailors discovered it from the natives in Polynesia.'

can remember. All the dominant-role models of my childhood had tattoos — my father, my mother, our minister, the family doctor, the mayor of the town.

In school, the best kids had them. The student-body president, the football captain, the head of the honor society, my closest pals all wore them. The principal and my favorite teachers too, had beautiful, multicolored tattoos.

BUT I DELAYED doing it. As time went by, I felt uneasy about my procrastination. When I would see a Marlboro advertisement in a magazine, a vague sense of guilt would come over me. Those cowboys holding their filter-tipped cigarettes in tattooed hands seemed to be mocking me.

It was easier when I began working for the newspaper. Most of my colleagues are effete pantywaists who shrink from having ornate snakes and daggers etched into their biceps triceps and chests.

But I recently took a voyage across the Atlantic on a Norwegian sailing ship and it was embarrassing to be with those outstanding seamen who wear their tattoos with such pride and dignity when I had nothing. I vowed that when I got home, I would do my duty.

I HAD HEARD and rejected all the arguments against being tattooed. It is obvious that to tattooing detractors, it comes down to social-class snobbishness. Very few presidents or Nobel Prize winners or

A Tattoo—With No Regrets

(Continued from B-10)

"It takes a lot of rest periods because the concentration required is tiring."

I checked out the scores of selections on the wall. Military emblems, religious scenes, giant heads of lions, panthers and other ferocious animals, eagles in flight.

"I'm thinking along the lines of a square-rigged sailing ship on the upper arm," I said, "along with a scroll that says, 'Death before Dishonor.'"

GRANDE LOOKED at my tricep, which is lean and soft in the extreme.

"I don't think there's room for all that," he said.

I settled on an anchor with the initials of the Norwegian ship I had sailed on. Grande explained there would be a slight pain, a kind of burning sensation, from the needle. He said an antibiotic and a dressing are applied for a day, a disinfectant should be swabbed on several times a day for three days or so while a scab forms. Grande said it takes about a week before the tattoo fully heals.

I told Grande that I scoffed at pain, but that if an anesthetic that would render me unconscious was unavailable, perhaps I'd just have the tattoo painted on at first to get an idea of its beauty. I thought I saw Grande sneer.

FIRST HE SHAVED the tricep of my left arm, took a clear plastic stencil with the selected design, sprinkled carbon dust on it and placed it on my arm. The carbon left the desired outline.

For a permanent tattoo, the needle comes next. The outline is blacked in with ink from bottom to top and the colors added. It is painstaking work.

The rope coiling around my anchor came out a spectacular yellow and the tips of the anchor and a fancy little star were painted bright red. Grande was through in a half hour and when I flexed my muscle, the anchor moved. It was stunning and even a little threatening.

"I GUESS NOW no one's going to kick sand in my face at the beach," I snarled at Grande.

Grande stared for a long moment at the anchor on my tricep. "If you want that to last," he said, ignoring my growling, "don't take a bath."

—With No Regrets

corporation executives, I've been told, have tattoos.

Many who get tattoos, others say, later regret doing it and become so ashamed that they don't remove their shirts for the rest of their lives. I felt contempt for such spurious excuses.

Dale Grande, who is in his 20s and did his first tattoo when he was 15, was seated in a corner of the tattooing parlor before a work area

containing his electric needle and an array of dazzling dyes.

Behind him on the wall were tattoo samples for the back and arms. Most were in the fashionable Oriental style. There was a purple octopus strangling a grotesque, green sea monster with its tentacles, and a man in an ornamental kimono plunging a huge dagger into a dragon.

"FOR THE WESTERN world,"

By Paul Galloway, Chicago Sun-Times

Grande explained in reply to a question, "tattooing got its start when Capt. Cook's sailors discovered it from the natives in Polynesia."

He said Illinois law forbids anyone under 21 from being tattooed and that he and his partner, Mac McFall, refuse to tattoo anyone on the hand or face or any other part of the body that usually is visible.

Women, Grande said, prefer pe-

tite tattoos usually on their breasts or hips. And those traditional favorites, the rose and the heart, are still popular. The minimum charge is \$20 and some of the more elaborate designs can cost several hundred dollars.

When you get into "back pieces," he said, you are charged by the hour. The biggest job Grande has done took 25 hours.

(Turn to Page B-14)

Jane Frick

The combined technology and knowledge of resource management that exists in our decade is theoretically capable of enabling controlled harvest of the existing protein resources of the sea without depleting them. In Bermuda, an unusual effort is being made to repopulate and eventually enable a controlled harvest of the Green Sea Turtle. With the help of many Bermudians this pilot restocking attempt has overcome some of the preliminary obstacles.

Sea turtles have thrived in the oceans for over 200 million years. All 5 genera - leatherback, hawksbill, ridley, loggerhead and green - nest on the sandy beaches of the temperate and tropical parts of the world. For the last 150 years, men have raided turtle rookeries during the vulnerable nesting time and have killed countless turtles and taken their eggs. Green turtles are especially desirable because of their largely herbivorous diet consisting mostly of turtle grass (*Thalassia*) which is metabolized to a very nutritious meat. However, despite the value of the meat, the small amount of cartilaginous substance along the midstrip of the turtle's plastron, called calipee, is the lip-smacking foundation of turtle soup and has been the cause of their decline. If the calipee trade is not controlled the sea turtle will vanish from the oceans before the mysteries of its life cycle are known; a valuable protein source will disappear, and the spectacle of its nesting activity will be lost forever.

Bermuda's green turtles were not killed off for calipee but for the survival of early inhabitants, and the small rookery was quickly wiped out. The rat plagues and famines in the early years of settlement forced the inhabitants to overexploit native fauna of the Island. In 1620 the Bermuda Legislature lamented what they called the "utter destroying and loss" of their turtles and passed a law preventing the taking of turtles under 18 inches long within 5 leagues off shore. This Act colorfully describes "the sundrye lewd and impudent psons inhabitinge within these Islands who in their continuall goings out to sea for fish doe upon all occasions, And at all tymes as they can meete with them, snatch & catch up indifferentlye all kinds of Tortoyses both yonge and old little and greate and soe kill carrye away and devour them to the much decay of the breed of so excellent a fishe the dayle skarringe of them from of our shores and the danger of an utter distroyinge and losse of them." Unfortunately the Act was all in vain. By 1700 there were no turtles nesting on Bermuda, although the Island continued to have enough turtles in its surrounding waters, presumably brought from the south by currents, to support a local fishery. Four years ago a moratorium on killing turtles came into effect, in support of a restocking effort.

Dr. Archie Carr, Professor of Zoology at the Univ. of Florida and a distinguished herpetologist and leader in sea turtle conservation, has made several efforts to reintroduce sea turtles to their ravaged nesting sites. Based on many years of tagging research on the green turtle at one of the last remaining rookeries in the Atlantic, Tortuguero, Costa Rica, he hypothesized that every rookery harbors its own separate population of turtles whose ancestry goes back to the first turtles that chanced to nest on the beach, perhaps millions of years ago. At that time, an imprinting process began to evolve, bringing nesting turtles back to their natal beach. He therefore felt it might be possible to restock depleted or extinguished rookeries by transplanting hatchlings and eggs. In 1967 Dr. Carr inspired Dr. and Mrs. Henry Clay Frick (Dr. Frick is a Trustee of BBS) to try transplanting eggs from Tortuguero to Bermuda. The first eggs were collected as the turtle laid them, transported, and reburied in Bermuda. They incubated for 2 months, and on a cool October night the first eggs hatched on a beach at Nonsuch Island; 56 turtles out of 86 transplanted crawled down the beach to the sea. Since then, many more imported hatchlings have emerged from the sands of Howard Bay and Nonsuch Island beaches - when the hatching season ended in Fall, 1976, an estimated 12,485 young had been released since 1967! With the exception of one year when the eggs were buried

in an area with poor drainage, Tortuguero eggs have survived adequately with an average hatch rate which is approximately 15 - 20% below the hatch rate on the natural rookery. We hope that the hatchlings will be imprinted with the sound, smell and location of the Bermuda nest-sites and that enough will survive to create a small breeding population.

A netting and tagging census carried out in the last 2 summers by the Assistant Director of the Bermuda Dept. of Agriculture and Fisheries, Dr. James Burnett-Herkes (also a BBS Trustee), Dr. & Mrs. Frick and Mr. Campbell O'Connor may indicate that the juvenile turtle population around Bermuda is increasing and that the average size and weight may also be increasing. Only 64 turtles have so far been netted and tagged, so more tagging needs to be done to be certain of any trend.

Bermuda has also started its own pen-rearing tagging experiments. Every year the Bermuda Government Aquarium, Geoffrey Cash, and the Biostation raise turtles in captivity. Dr. Burnett-Herkes then tags and releases them when they are 2 years old. Mr. Brunell Spurling (former BBS Superintendent and now Life Trustee) is a fisherman interested in the project, and has caught and turned in several turtles that had been released a year or 2 ago. Mr Spurling has also noticed a few very small turtles feeding near the shoreline. It may be that yearling turtles are not moving far from the Island and are grazing in small flats of coastal marine grasses. Needless to say we are very encouraged by these developments.



The author holding a hatchling connected to float and tracking device, gear which is harmless and removed before turtle is freed. Inset: free-swimming hatchling.

Photo by Stephen Bainbridge

Bermuda has also been an ideal place for tracking hatchlings since its waters are clear and relatively free of sharks. For four years, with the help of many Bermudians, I have followed hatchlings off various beaches on the Island, both by swimming after them and, at night, with telemetry gear built by Dr. Len Ireland (Oakland Univ., Mich.) and chemical light vials mounted on the turtles. The tracks have ranged from 2 to 6 km in distance. The hatchlings orient away from the land mass regardless of the direction of the site of release, current and wind direction, time, and position of moon or sun. On three different occasions they climbed into patches of Sargassum weed. One was seen feeding on a ctenophore. More observations carried out during longer tracks will add to the meager knowledge of the hatchlings' first year.

Since most Bermuda beaches are now crowded and therefore inadequate for turtle nesting there is no way a turtle fishery based on restocked turtles could contribute significantly to the Island's food supply. However, the project hopefully will provide biological guidelines for future artificially created rookeries. In addition, information accumulated has added to the knowledge of the biology of the green turtle, and has contributed to the growing awareness of the need for wildlife protection.

ATTENTION BBS CORPORATION MEMBERS AND TRUSTEES: The Annual Meeting will be April 16th in New York City.

While we are waiting for somebody to find the habitat of young sea turtles it would be very helpful to be able to mark hatchlings in a way that would make them recognizable when they reach maturity. It is, as I said, not even known whether the big female turtles that go ashore on a given beach hatched out on that beach a decade or more before. The strong site tenacity the females show in going back to a place for repeated nestings makes it reasonable to believe that they must have been born where they themselves nest. But this can be proved only by recoveries of mature turtles that were marked as hatchlings. And though it sounds like a simple thing, a permanent tag for a baby turtle is frustratingly hard to devise.

The trouble is finding a mark that will resist the changes a turtle undergoes when it grows from a three-ounce hatchling to a three-hundred-pound adult. Holes punched in the edge of the shell or flippers fill in, or erode through to the margin. Notches sawed in the shell-edge open into wide emarginations as the shell grows, and then disappear completely. Branding the upper or lower shell makes a mark that might last if the size of the turtles stayed the same; but they grow so fast it soon becomes impossible to tell the brand from a barnacle scar or a coral-scratch or, later on, from the marks made by the courting male. It is the same with tattooing. You put on a fine, clear, pigmented mark and in three months the particles of

ink have all spread apart or are hidden under thickening upper layers of shell or skin. And the fastening on of mechanical devices is completely impracticable. Any external tag is soon either overgrown or popped off by the increasing thickness of the tissues it perforates. A radioactive tag of some sort came to mind early in the sea turtle study. This was quickly ruled out, however, because of the risk of ill-feeling among people about the Caribbean, when they should learn of the plan to install radioactive slugs in an animal so esteemed as human victuals. It could be done in a harmless way, but it would make for prohibitively bad public relations, in a project that depends on pan-Caribbean good will.

When plans for radioactive marking of hatchlings dissolved, the idea of a magnetic tag came up. Why not get a lot of tiny magnets made of some of the new alloys that make stronger magnets than iron does, and somehow install these inside thousands of baby turtles? Of course, nobody without a magnetometer would be able to tell a tagged turtle from an untagged one; but with the right detection apparatus, it ought to be possible to move about among turtles in a crawl, or lying belly up in a fish house or turtle cannery, or on the deck of a Cayman schooner, and pass the instrument over the outside of the turtle and detect the presence of any field of magnetism that a magnet inside might be throwing out. The idea seemed

promising. It was hard to figure a way to code the magnets so that an individual turtle could be recognized, but at least it seemed a way to identify a Tortuguero hatchling, for instance, if you found it as a twenty-five-pound Florida yearling, or if it should come ashore still later to nest on Tortuguero beach.

I looked around and had no trouble locating an engineering company willing to furnish the magnets. They designed and made us 20,000 beautiful little magnets of a fancy alloy. They put them up like tiny sausages, in chains of ten, in tight-fitting tubes of teflon. Each magnet was a thin, shiny section of wire, only eight millimeters long. It could easily be injected into a baby turtle by inserting an ordinary hypodermic needle and then pushing the magnet in through the needle with a sterile plunger. They were lovely little magnets, and we stuck a lot of them into baby loggerheads,

green turtles, and hawksbills, and the turtles seemed not to mind at all.

But this scheme went to pieces, too, when the contractor called one day to say that the magnetometer he had designed for the work had turned out to be able to detect the magnets at a distance of only five centimeters. An instrument sufficiently sensitive to detect the feeble field of our tags would cost nine times the original estimate, and even with that, the turtle being inspected would have to be given a very close going-over. The body of a sea turtle changes its form and dimensions drastically, and the little magnets seemed likely to shift about inside. Finding one of them in a turtle the size of a calf, which might be the only marked turtle among twenty other untagged ones, seemed just too shaky a prospect to work hopefully toward. Especially when you pondered that the detection was a blind search for a grown-up hatchling that had been one of a handful tagged, among millions of its year-group that got no recognition mark at all.

I don't know what to make of the fact that, as different as the habits of the five kinds of sea turtles are when they mature, the young of all of them remain equally hidden from view. I have talked mostly about *Chelonia* in this chapter, but only because more is known about it than about the others. The habitat of all hatchling sea turtles is unknown. It is a dilemma, therefore, whether to theorize about five kinds of lost hatchlings, or to try to trace them down one by one. I suppose both have got to be done at once.

It may prove nothing at all, but the farthest from any possible nesting beach that baby turtles have been recorded was a hundred and thirty-five miles. The turtles were three baby loggerheads. They were taken from the stomach of a white-tipped shark by the re-

search vessel *Atlantis* in the open sea due east of Cumberland Island, Georgia. Maybe the shark ate the turtles away out there where he himself was caught. Maybe, however, he ate them in close to the hatching beach and then swam out to sea. There is no way of knowing; and if one did know, it would do little to help solve the puzzle of lost baby turtles, generally. If the shark ate the

little loggerheads where he was caught, what were they doing out there, and where in the world were they going?

Wherever it is that hatchlings seem to lose themselves, they cannot be really lost. They must be in some pretty good place which, though not thought of by zoologists, is nevertheless altogether reasonable and proper for little turtles to be in. Until that place is found, there will be a big gap in the natural history of sea turtles. There will be unknown enemies of turtle hatchlings out in unknown places, and unknown ways to foil them. Famine and storms will be out there where the hatchlings are, and good things to eat, too, and calm seas for foraging. So long as this vital, vulnerable stage in the lives of sea turtles remains hidden from view, nobody can hope to know why a sea turtle lays a hundred eggs.

From-

SO EXCELLENT A FISHE

by Archie Carr
1967

P108-110

reprinted by G.H. Balazs

UNIVERSITY OF HAWAII
Hawaii Institute of Marine Biology
Coronado Island • P. O. Box 1245 • Kaneohe, Hawaii

Hairy Tattoo Problem

DURING a recent windstorm, a strong gust lifted the hairpiece off the head of a friend of mine and wafted it into the middle of a busy street.

By the time he retrieved it, the tires of several cars and a truck had passed over it. It looked like a mashed rat, which is not what you would want to wear on your head to impress the disco ladies.

In addition to the embarrassment of greeting his date with his hair stuffed in his pocket, he was out the \$225 he paid for the toup.

This is not an uncommon problem, I'm told, especially in a city as windy as Chicago.

And with hundreds of thousands of men in our hair-conscious society wearing hairpieces, who can estimate their total financial loss?

Most men who wear hairpieces own at least two of them. They need a spare to wear when they send one out to be cleaned, or if it blows away, or if a bald thief snatches it.

So their investment can be considerable. And when my friend told me about his expensive and embarrassing experience, I began thinking about a possible low-cost alternative to the traditional hairpiece.

And I wondered if it would be possible for a bald man to have his head tattooed so it looked like he had hair.

THAT WOULD SOLVE the wind problem. Even on some of the downtown plazas, the wind is seldom fierce enough to blow off a man's scalp.

It would also be permanent. No costly replacements. No expensive cleaning bills.

But is it possible? Depending on which tattoo artist you talk to, the answer is yes, no, and maybe.

Mike Doogin, of the Southwest Tattoo Emporium, said:

"Yeah, we could do dots."

Dots?

"Yeah, tiny dots. Then he'd look like he had hair, but that he had shaved his head."

Ah, sort of like a 5 o'clock shadow all over your

head. But what about making it look like regular hair?

"That's been done if a guy has at least some hair. Then we could do strands. And when he combed his own hair over the tattooed strands, it would look like he had a lot more."

Have you ever done it?

"To tell the truth, we usually stay away from heads and faces, although I just gave a girl some eyebrows."

WHY DID SHE NEED tattooed eyebrows?

"Because she didn't have any eyebrows of her own."

That makes sense.

Next, I spoke to Greg Lamont, who does his

Mike Royko

tattooing at the Lake Geneva Tattooing Studio in Wisconsin.

Before moving to Wisconsin, Lamont worked with the legendary "Tats" Thomas in Chicago, who put thousands of anchors and sea monsters on the arms of several generations of Great Lakes Navy recruits.

He burst out laughing when I asked about tattooing hair on bald heads.

"You're not going to believe this, but I once saw it done. A guy walked in and said he wanted it. We tried to talk him out of it. I told him: 'You know, once we do it, you've got it for life. And if you don't like the style, you can't change it.' But he wanted it, so Tats did it for him, and he seemed happy when he left."

Comes to a Head

But that wasn't the strangest tattoo Lamont ever saw. He actually knew the late Ralph Johnson, about whom I had only heard.

Johnson was a tall man who had the top of his bald head tattooed with the face of Jesus. He liked to walk up to shorter people and bow. If they were really religious, they would jump five feet in the air.

AS FOR TATTOOING a head of hair, Johnson said he wouldn't do it.

"I don't think it would look very good. At best, it would look like kind of a slicked down, wet look, which isn't fashionable."

While chatting about tattoos, Johnson revealed an interesting trend. About 35 or 40 percent of his customers are women. And he said some parlors report as many as 50 percent.

Years ago, he said, women represented less than 5 percent of tattoo customers. And they included the once-famous Chicago hooker who had the words "To Hell With Housework" tattooed in one-inch letters beneath her navel.

I asked him if today's women prefer anchors, eagles or the names of their boyfriends.

"No, they are getting butterflies or flowers or strawberries."

I haven't seen women with such things on their arms.

"That's because they either got them on their shoulder blades, hips or buttocks," he said.

You have an interesting job, I said.

"Beats house painting."

THE FINAL EXPERT I consulted was the manager of the Chicago Tattooing Co.

Would it be possible to tattoo a bald head so it looked like the guy had hair?

"It depends," he said.

On what?

"Well, if he was on the other side of the street, yeah, it would look like he had a head of hair."

How about up close?

"Up close? Up close it would look like he had a head of ink."



Beauty That's

By Steve Spence, Star-Bulletin Writer

AND since you asked, here's everything you'll ever need to know about tattoos but were too timid to inquire about at the last two or three remaining parlors in the Hotel Street area.

• It is said that white sailors first acquired their obsession for tattoos when they saw them on Hawaiians after Captain Cook's arrival here in the 18th century. What the sailors gave the Hawaiians in return, unfortunately, was white man's diseases, which nearly annihilated the native population.

• Tattooing in Hawaii dates back to 1200-1300 A.D. The Hawaiian word for it is *moli*, the same word for albatross, and that's because the sharpened leg bone of the bird was used to make the ancient tattooing instrument.

• Evidence of tattooing dates back 8,000 years. One of the first ethnic groups to practice tattooing were persons—caveman types—dwelling in Portugal.

• In ancient Egypt, dancing girls, concubines and women slingers were tattooed with the symbol of Bes, the goddess who was supposed to protect such women. In perhaps the first case of sex discrimination, the men refused to be tattooed.

tic blunder was considered intolerable.

• "Go West, young man, but go tattooed." It is said that some pioneers crossing Indian country bore tattoos for no other reason than a hedge against being chopped up by the original Americans, who apparently had a soft spot for men bearing designs on their bodies.

• The most popular tattoo for homosexual men is twin screws on the buttocks, often with the naval warning tattooed nearby: "Stand Clear!"

• The most sensitive or painful area to be tattooed is not on the genitalia, but on the fingertips.

• In a number of cases, complications arising from tattoos have gone beyond simple itching and infection—two customers in Australia got leprosy, and 23 in France got syphilis.

• In 1943, there were 33 tattoo artists working in 8 tattoo parlors in Honolulu, and they were putting permanent pictures on the bodies of between 300 and 500 persons daily!

THE SOURCE OF MUCH of this infor-

Only Skin Deep



This Japanese man is waiting to have his colors filled in.



More women are getting tattooed now — Madame Lazonga of Seattle was voted 'Most Beautifully Tattooed Female in America' a while ago.

• In the 11th century, the Japanese identified criminals by tattooing them. The greater the number of convictions, the more tattoos on the bad guy. Before this form of punishment, a Japanese criminal could expect his vengeful peers to slice off his nose, or perhaps an ear.

• Tattooing is illegal in a number of states, including Vermont, Massachusetts and Connecticut, not to mention New York City. In Florida, it's also prohibited—except when done by a doctor or dentist (or when you can get a note from them saying it's okay). In Montana, it's illegal to tattoo horses, but not people. There is but one tattoo parlor in Washington, D.C., which the government swears "is regularly inspected for sanitary practices."

• Proving that Jewish mothers have always had the last word, there is no evidence of tattooing among Hebrews.

• The Ainus, an aboriginal, nomadic people of northern Japan, brought the practice with them as they wandered across Asia. Ainu women had their chins and upper lips tattooed with an imitation of hair, which is said to be a desire for the power of men, or in modern terms, mustache envy.

• In ancient Hawai'i, being a tattoo artist was a risky business. The usual penalty for spilling the blood of an *ali* (a royal personage), or even touching one, was death. The tattooer was given temporary immunity during tattooing, but that was easily revocable. An artis-



Tattoo artist Mike Malone of the China Sea Tattoo Co. on Smith Street examines a client.

mation is Dr. Norman Goldstein, an associate clinical professor of dermatology at the University of Hawaii School of Medicine. In 1964, he was an Army dermatologist at Tripler Hospital, where he first developed a "cultural" fascination for the tattoo.

At Tripler, most of his patients were servicemen, many of whom went to a dermatologist for tattoo complications. It was thought at the time that red dye in tattoos caused a nasty skin reaction when exposed to a lot of sun. Goldstein, after years of research and experimentation, discovered that it was not red dye, but the yellow that the tattooist adds to the red to brighten the color. The yellow dye, in layman's terms, made the skin cells photo-electric, resulting in bumps, itching and infection.

Goldstein's discovery appeared in a major medical journal, and he was dubbed by his medical peers as "the Sherlock Holmes of dermatology."

Since then, Goldstein has pursued tattooing for its cultural significance, and on Monday, he unveiled a "scientific, artistic and cultural exhibit, 'The World of Tattoos,'" at the Hawaii Medical Library on Punchbowl Street, where it will remain on view through Feb. 29. The free exhibit contains photos of all sorts of tattoos that Goldstein collected from some 400 dermatologists around the



Norman Goldstein became fascinated by tattoos while in the Army.



Elaborate Japanese tattoos often spill over the entire body.

Star-Bulletin Today

Features
Entertainment



Honolulu
Thursday, January 24, 1980

world, the least of which is the lower lip of a Dutchman who had the name of his favorite beer tattooed there, to a tiny butterfly that adorns one of the human body's most sensitive spots. There are some 700-year-old Hawaiian tattoo needles, a mummified tattooed arm from the Bishop Museum and any number of ghastly photographs depicting some of the terrible things caused by tattoos.

GOLDSTEIN'S SKIN, however, is an unmarked as it was the day of his birth. "I'm not trying to promote tattoos, I'm interested in it historically. If a person wants a tattoo, I would say go ahead. But once it's on, it's permanent. It can be removed, but there's always a scar."

In tracing tattooing's gaudy history, Goldstein came up with some rather frightening information. Thirty-five or 40 years ago, a French tattoo artist who suffered from syphilis passed on the disease to 23 of his clients; he did this by moistening his tattooing instrument with his own saliva, and since the disease's organism grows in the mucous membrane, it was transferred into the client's blood system.

Among a few other rare cases, leprosy was passed on by an Australian tattooist to two Marines in the same manner as the syphilis incidents.

During his tour at Tripler, Goldstein also contributed to a psychological study of 50 men who were tattooed, and 50 who

were not. "In this study, having a single tattoo made no difference in the person's emotional stability. But the more tattoos (a man had), the more psychological problems he had. With eight or 10 tattoos or more, we began to get psychotics. And there was the nature of the tattoo: daggers and such suggested an aggressive, angry outlook on the world. With the letters L-O-V-E on the knuckles, it normally meant the man was asking for love, like, 'Hey, I need help, love.' The ones with L-O-V-E and H-A-T-E were really confused; they don't know what they want."

GOLDSTEIN'S RESEARCH estimates that in Honolulu alone 300 to 500 persons were being tattooed daily in 1943 during the height of World War II. That figure is vastly reduced today—only a few parlors remain in the Hotel Street area—but the popularity of tattoos is increasing in other areas, particularly with women. The butterfly on the shoulder or the rose on the inside thigh, Goldstein says, is now common, a practice that 20 years ago might have resulted in a woman being shunned by society. "You have to remember that we see a lot more of the body today," he said, suggesting that great numbers of women have had tattoos historically, but that they were never visible in public.

Goldstein, who has also authored a book titled "The Skin You Live In," also notes that it is about four times as expensive to have a tattoo removed than it is to acquire one. And removal methods don't sound like much fun: dermabrasion, which is an abrasive wheel that scrapes off layers of tattooed skin; freezing off a tattoo with liquid nitrogen; deep dermabrasion, which, because of the depth required, can expose fat globules and result in nasty-looking scars, and simple scalpel-type surgery.

Goldstein, who has a private practice in Honolulu, says he will not remove a tattoo unless it is clear the patient does not intend to add another tattoo. "A guy with 15 tattoos comes in and says he wants one removed... well, I know he's going to get more, so I won't remove it. But if a guy wants one removed from his forearm 'cause he's got a job in a bank, I'll do it." Goldstein says he gets an average of two requests for removals each week.

IF YOU CAN'T LIVE without a tattoo, Goldstein suggests going to an experienced tattooist. "With anything, I'd go to the person with the most experience." He considers the Japanese tattooists to be the best, and when asked who were the worst, he replied: "Any homemade tattoo," principally because the single-needle approach results in unequal levels of pigment penetration, not to mention most amateurs have no idea what they're doing.

Asked if his hobby means he favors tattooing, Goldstein replied: "I'm open. I'm not anti or pro. What interests me is the cultural aspect, and all cultures throughout history have been tattooing themselves."



This native Hawaiian woman has a delicate tattoo motif poked into the skin around her neck.

No time
per day
definitely
done

Marking Reptiles with an Electric Tattooing Outfit

By ANGUS M. WOODBURY

SINCE 1939, I have been experimenting with the marking of snakes for individual identification by placing tattooed numbers under the skin in such a way that moulting of the skin would not obliterate the marks. During that time, 777 Great Basin rattlesnakes, *Crotalus viridis lutosus*; 471 western striped racers, *Masticophis taeniatus taeniatus*; 41 western blue racers, *Coluber constrictor mormon*; and 17 Great Basin gopher snakes, *Pituophis catenifer deserticola*, have been numbered by this method.

Many of the rattlesnakes and striped racers have been recaptured in the wild from time to time, some of them several times. Of the blue racers and gopher snakes, in which the numbers of individuals involved were so small, only one recapture has been made. Some of the marks made in the early part of the experiments have been difficult to read, but among the later marks there have been almost no failures.

The tattooing outfit, made to carry in the field, was constructed with the aid of Lamont C. Cole from the following materials: a door bell vibrator coil, to which was attached a short piece of piano wire with six small needles soldered around one end and so arranged that the vibrator moved the wire back and forth in the outside cover of a mechanical pencil. It was adjusted so that the needles protruded from the pencil about 2 mm. when in action. The vibrator was driven at first by four dry cell batteries, but later the number was increased to eight to give it more driving power.

The current from the battery was regulated by a switch so arranged on the pencil that it could be closed when the pencil was grasped and opened when compression was relaxed. In practice, a snake was held in one hand and the tattooing pencil in the other. In order to secure the snake so it could be held in the hand, its head was securely fastened in a leather loop on the end of two sliding sticks. This was held by an assistant when available or placed on the ground under my foot when alone.

In use, the pencil was dipped in a carbon (India) ink, then placed in position and the vibrator started by closing the switch on the pencil with the finger. By pressing the pencil against the skin of the snake and moving the pencil around in the desired direction, figures could be made. The needles carried ink through the skin and left some of it deposited underneath. When heavy scales were encountered, it was necessary to drill through them and leave ink below. It was these heavy scales that required the current from the extra batteries to drill through them. It also became necessary to supplement the vibrator with an extra spring to extract the needles from the scales.

The procedure usually left a smear of black ink on the surface of the skin, which, if removed by a damp cloth, usually revealed the punctures in the skin so that the pattern of the figures could be discerned and supplemental punctures made if necessary. It was found mandatory in making the figures to make extra long strokes on the ends of nearly all the figures in order to distinguish between such figures as 2, 3, 5, 6, 8 and 9.

By the time of the next moult, the punctures of the skin are usually healed and all surplus ink on the surface of the skin is removed. The ink

under the skin is much fainter but under favorable light, the figures can usually be read. Experiments were made with several colors of inks but all were discarded in favor of the black. When numbers were placed on young snakes, the dots left at each puncture gradually separated as growth proceeded and produced a fainter number.

Such numbers do not show very well on pigmented surfaces. The ink is difficult to distinguish from the pigment. To produce satisfactory results, it is necessary to have a clear plain surface. In the racers and gopher snakes the numbers were placed under the base of the tail but this position proved to be unsatisfactory in the rattlesnakes and they were numbered on the ventral side, a few inches back from the head.

This required a special technique, since the soft underside had so little resistance that it was difficult to drill through the scales. There was danger of drilling through the skin into vital organs, from which some deaths resulted during experimentation. However, it was found that it could be accomplished easily and safely by pulling the ventral skin around onto the side and drilling against the ribs.

This method has proved to be a useful and practical way of marking snakes on a large scale for individual identification. Its accuracy is further insured against mis-reading numbers if there is recorded with the numbers such supplemental data as the scale count of the tail plates, which can be checked when recaptured. The writer prefers this method to that of scale clipping, largely because of the difficulty of establishing a satisfactory base from which to count to the scales that are clipped and the consequent uncertainty in individual identification.

It is believed that this tattooing method could be used satisfactorily with lizards, amphibians and fishes. A. Gandolfi-Hornoyold (1929) reported marking six silver eels on the light ventral side with India ink by means of a bundle of needles in the oriental fashion. He found the marks clearly legible on five that were still alive six weeks later.

Further experiments in marking fish by the same method were reported by Hickling (1945) in which identification marks were tattooed on plaice, soles and rays kept in tanks. The identification letter and number were easily applied to the soft skinned plaice and soles but the rays had tougher skin that was difficult to penetrate with the needles and the process was less successful with them. Doubtless his tattooing outfit did not have sufficient driving power properly to penetrate the tough skin. After seven weeks (August 4 to September 26, 1939), the markings on three out of ten plaice could be clearly read but three others were faint and four were so faint they could scarcely be discerned.

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DEPARTMENT OF BIOLOGY, UNIVERSITY OF UTAH, SALT LAKE CITY, UTAH.

Tattooed Women and their mates



Easter Island man.

GN-AP.3 Z8

Edited by Hal Zuecker
Andre Levy Philadelphia



Seri woman (Mexico).

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POLYNESIAN TATTOOING: THE TECHNIQUES,
ICONOGRAPHY, PATRONAGE, PROFESSION,
AND ESTHETICS

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A THESIS SUBMITTED TO THE GRADUATE SCHOOL OF THE
UNIVERSITY OF HAWAII IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS
IN PACIFIC ISLANDS STUDIES
JANUARY 1965

By

Robert William Sparks

Thesis Committee:

Leonard E. Mason, Chairman
Harold E. McCarthy
Edward A. Stasack

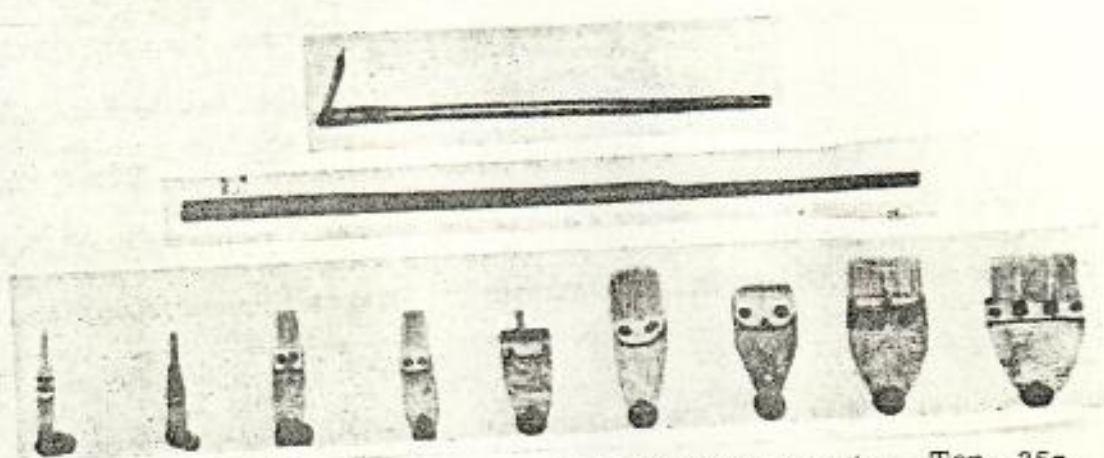


Fig. 1. A set of Samoan tattooing instruments. Top, assembled comb; center, tapper; bottom, comb plates of various widths. (From Marquardt, 1899: taf. xviii.)



Fig. 2. A Samoan tattooer imprinting dorsal patterns. The artist, left, holds the comb in his left hand and the tapper in his right. The assistant is stretching the subject's skin to provide a taut working surface. (From Marquardt, 1899: taf. xix.)

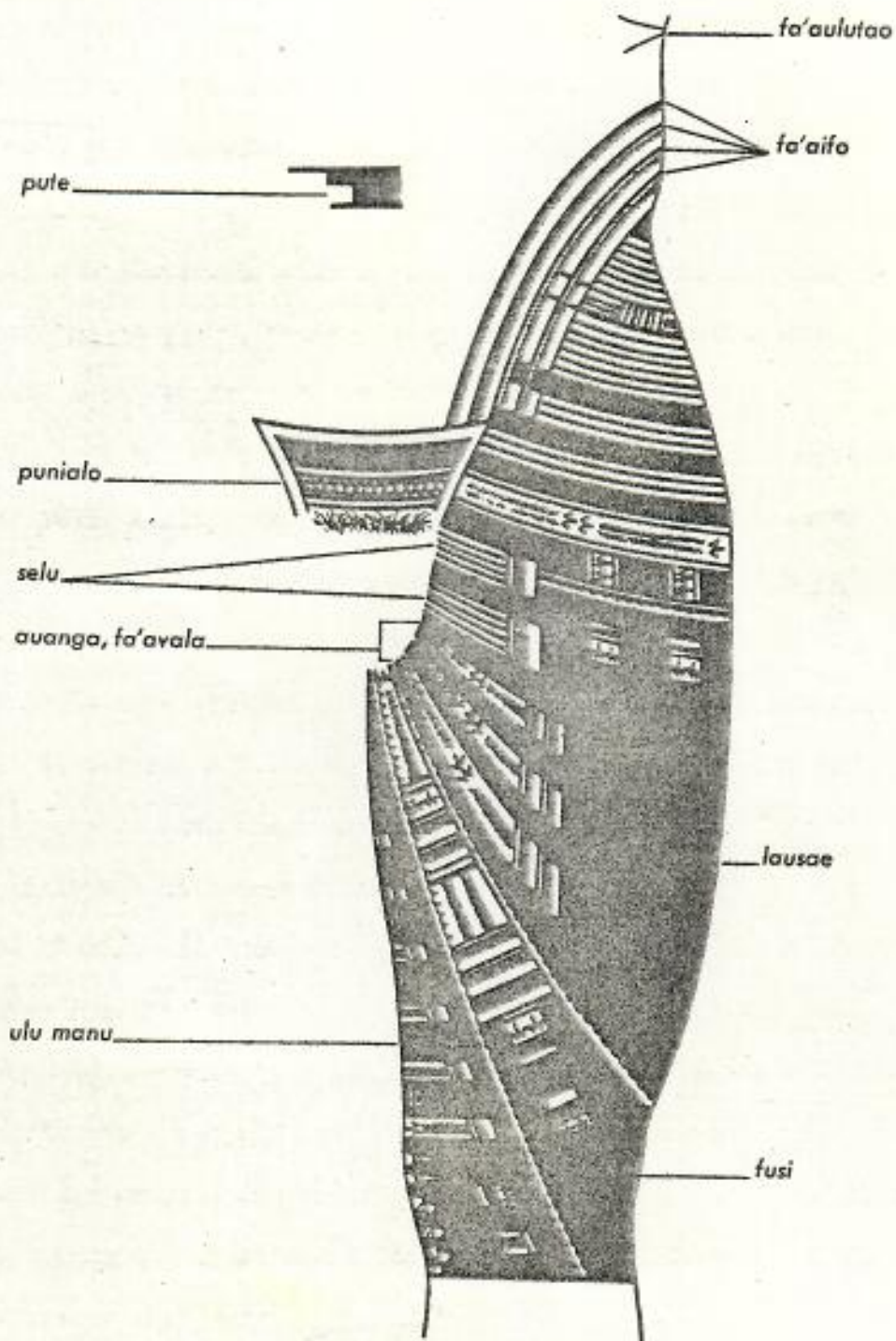


Fig. 4. Ventral patterns on Samoan males. (Drawing from Marquardt, 1899; additional nomenclature from Kramer, 1903, and Buck, 1930.)



Fig. 5. Small motifs used in Samoan tattooing on both sexes. (After Kramer, 1903, and Buck, 1930.)

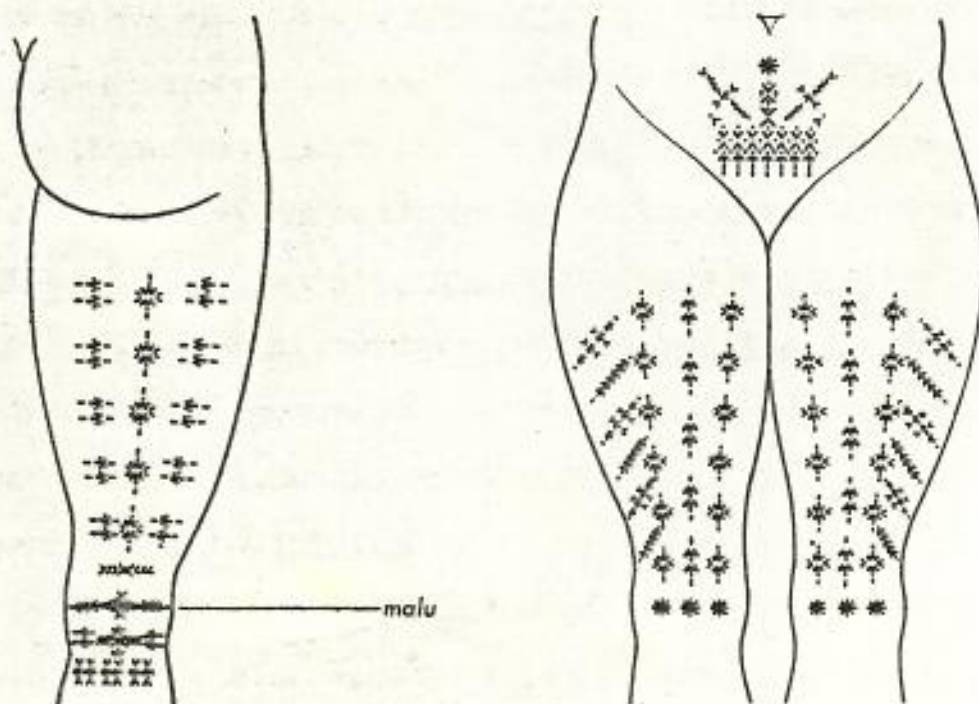


Fig. 6. Patterns on Samoan females. Left, dorsal surface; right, ventral surface. (Drawing from Marquardt, 1899.)

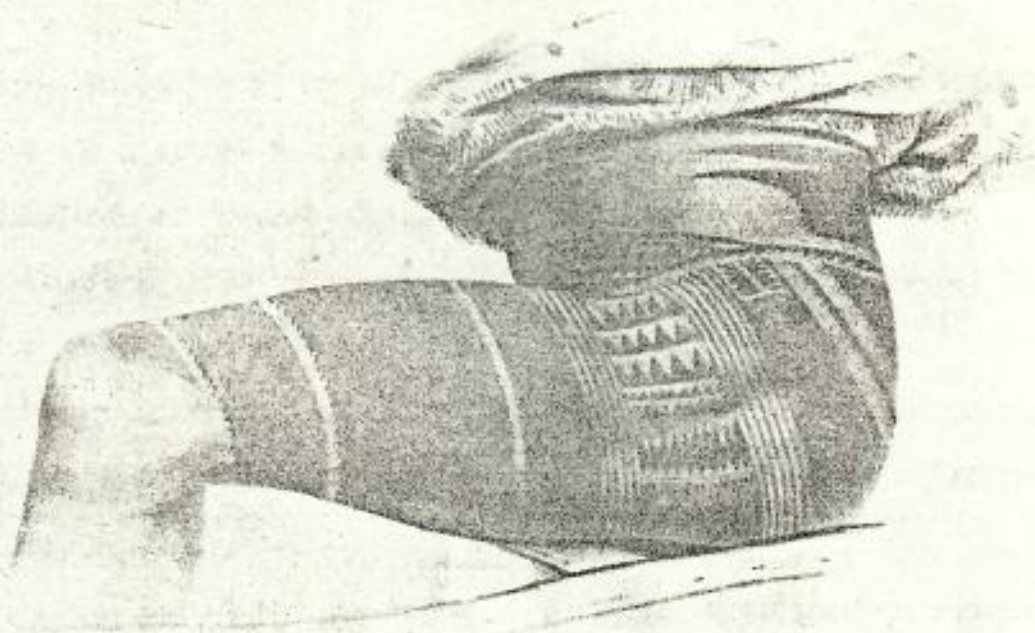


Fig. 7. Patterns on Tongan males. (From Dumont d'Urville, 1836, atlas v. 1.)

of a pair of lines running up the spine, with pairs of short lines branching upward toward the sides of the back. For the following marks the locations on the body have not been recorded. Fuspua inana (male pandanus flower), a lozenge shape; komua (forward thrust of spear), a triangular motif; paeko, a triangle, two lozenges, and a triangle, all in a row; puna rua, an hourglass shape.

Atiu

Very little information on the designs has been published. Men were tattooed on the back and sides of the body, and the legs of some men and women were ornamented from the knee to the heel (Buck, 1944:127).

Rarotonga

A colored plate made from a painting by J. Williams (1837: illus. facing p. 503, but a frontispiece in some editions) shows a man tattooed with concentric rings from the neck to the ankles, including the arms. Buck (1944:127) is of the opinion that this pattern is suspect, but he does not give his reasons. Over each knee the subject has a simple outline of a turtle, somewhat indistinct in the edition I have seen. One man mentioned by Sunderland and Buzsott (1866:42) was marked on the hands and arms to just above the elbows, and on the feet and legs to just above the knees.

The following designs were recorded by Buck (1944:131-132, fig. 72). The Rau teve (leaf of arrowroot) was a horizontal row of four to six hourglass-shaped figures terminating at each end in a three or four-lobed motif. This design was imprinted across the back of the neck, the lobed element behind each ear. Two different patterns for the wrist were both named ruru. One of these was a rectangle containing

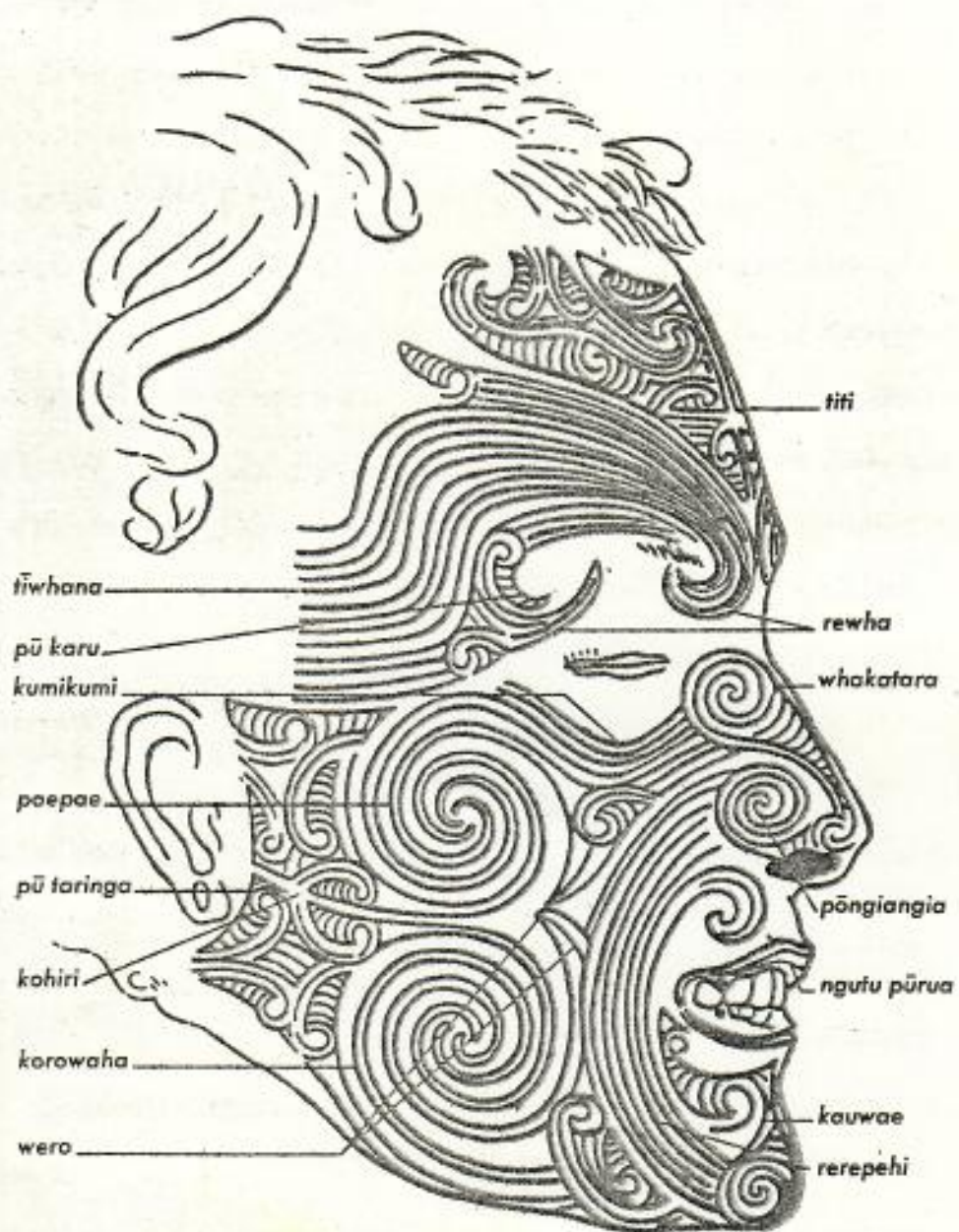


Fig. 10. Face patterns on Maori males. (Drawing from Hamilton, 1896; nomenclature from Robley, 1931.)

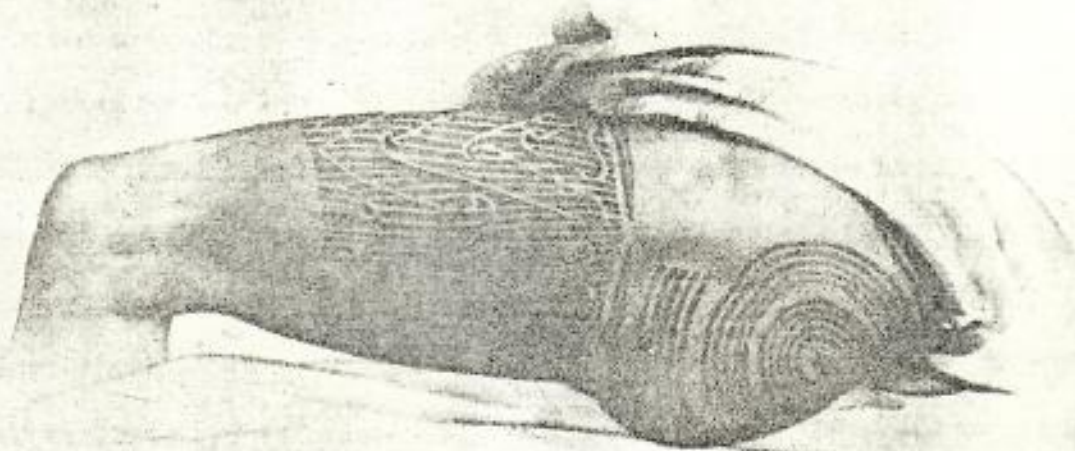


Fig. 11. Thigh and buttock patterns on Maori males.
(From Dumont d'Urville, 1836, atlas v. 1.)



Fig. 12. Face patterns on Maori females.
(From Robley, 1896.)

around the genitals was decorated with a triangular design called tara whakairo.

Marquesas Islands

In this group of islands the amount of ornamentation on both sexes was the greatest in Polynesia. Tattooing on males was applied to the face, including the eyelids, and to the neck, trunk, arms, both sides of the hands, and to the legs and feet. Occasionally, even the tongue and the insides of the nostrils were inked. The genitals were not ornamented.

All of the principal marking was bilaterally symmetrical, but this was not always true of the smaller details. Both rectilinear and curvilinear designs were used. Most of the body was covered with wide bands of solid inking ornamented with intricate motifs. The bands were separated from each other by vertical and diagonal stripes of untattooed skin. As will be seen, there were some stylistic differences between the northwestern islands (Nuku Hiva, Ua Huka, Ua Pou) and the southeastern ones (Hiva Oa, Tahu Ata, Patu Hiva).

The sequence in which the patterns were imprinted was determined by the social rank of the patron. On subjects of high status the process was begun on the feet and continued upward to the face, while on persons of lower position the marking was started on the face and carried downward. In the first operations on any individual only the groundwork of the main designs was applied. In later operations these patterns were filled in and others added.

The designs have been discussed at length by W. C. Handy (1922:13-25, pls. i, iii-v, viii, xii-xiv, xxix-xxxviii) and von den Steinen (1925:

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102-127, abb. 40, 53-55, 57, 58, 60-69, 71). Both of these authors provide valuable accounts, but their information was collected after the traditional practice had ceased and thus neither of them was able to present a truly comprehensive study of the art. Brief comments on the patterns have been made by de Quiros (1904, v. 1:16), Forster (1777, v. 2:14-15), Marchand (1801, v. 1:148), von Krusenstern (1810, v. 1:168-169), von Langsdorff (1813, vol. 1:122-123), and Porter (1815, v. 2:14).

Most of the bands were named for the part of the body on which they were put or for their decorative function, i.e., encircling, covering, and so forth. Each island used a slightly different terminology, largely the result of the dialect variations occurring among them. W. C. Handy lists more than 70 names of designs, but almost all those which are identified in her illustrations are for small motifs. Her informants said that many more terms had been forgotten. More than 175 names were recorded by von den Steinen, but as with W. C. Handy most of these are for small designs. Because von den Steinen provides illustrations of the more important patterns used on Hiva Oa his nomenclature from this island is used below (except where noted otherwise). Only a few of his names agree with those collected by W. C. Handy, and neither author always indicates which island a design name is from.

The most common facial style for the male was termed tiapu (encircle) and consisted of three bands of solid inking, the kokeka (crooked) across the forehead, the vai mata (tears) across the eyes, and the tiapu te mutu (encircle the lips) across the mouth (see Figure

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13). If only one side of the forehead was imprinted the band was called kokeka yahu (incomplete kokeka). These bands were often inset with small geometric motifs, which also were sometimes put between the bands. A variant style, called paheka (crosswise), had a diagonal band from the center of the forehead across one eye and cheek, or across only the eye. Three earlier styles were described to W. C. Handy by her informants. In the first, spirals enclosed both eyes and also were put on both cheeks, there called koko ata. In the hue epo pattern a solid circle covered the eyes and the mouth. The third style employed solid vertical bands on each side of the face, their edges passing along the eyebrows, the nostrils, and the mouth.

The principal design on each side of the ventral surface of the torso was a wide perpendicular band called ti'i heke (patterns descending) or fau tsi (pieces of bark). It began under the chin and terminated over the pubic region. This band consisted of four rectangles of solid inking, termed pene hipu, alternated with an equal number of rectangular sections of various motifs.

The dorsal ornamentation began on each side of the back of the neck with a rectangular patch (see Figure 14). Below this, on each side of the spine from shoulder to waist, were four large slightly curved rectangles of solid inking, the po'o (part). Small geometric elements were inset along the edges. Below the po'o was a wide, arching band, the kohu ts, which followed the hip contour and extended onto the thigh. Each buttock was ornamented with a compound circular design of several small motifs. According to W. C. Handy, the overall pattern was on each buttock termed tifa (cover), while von den Steinen

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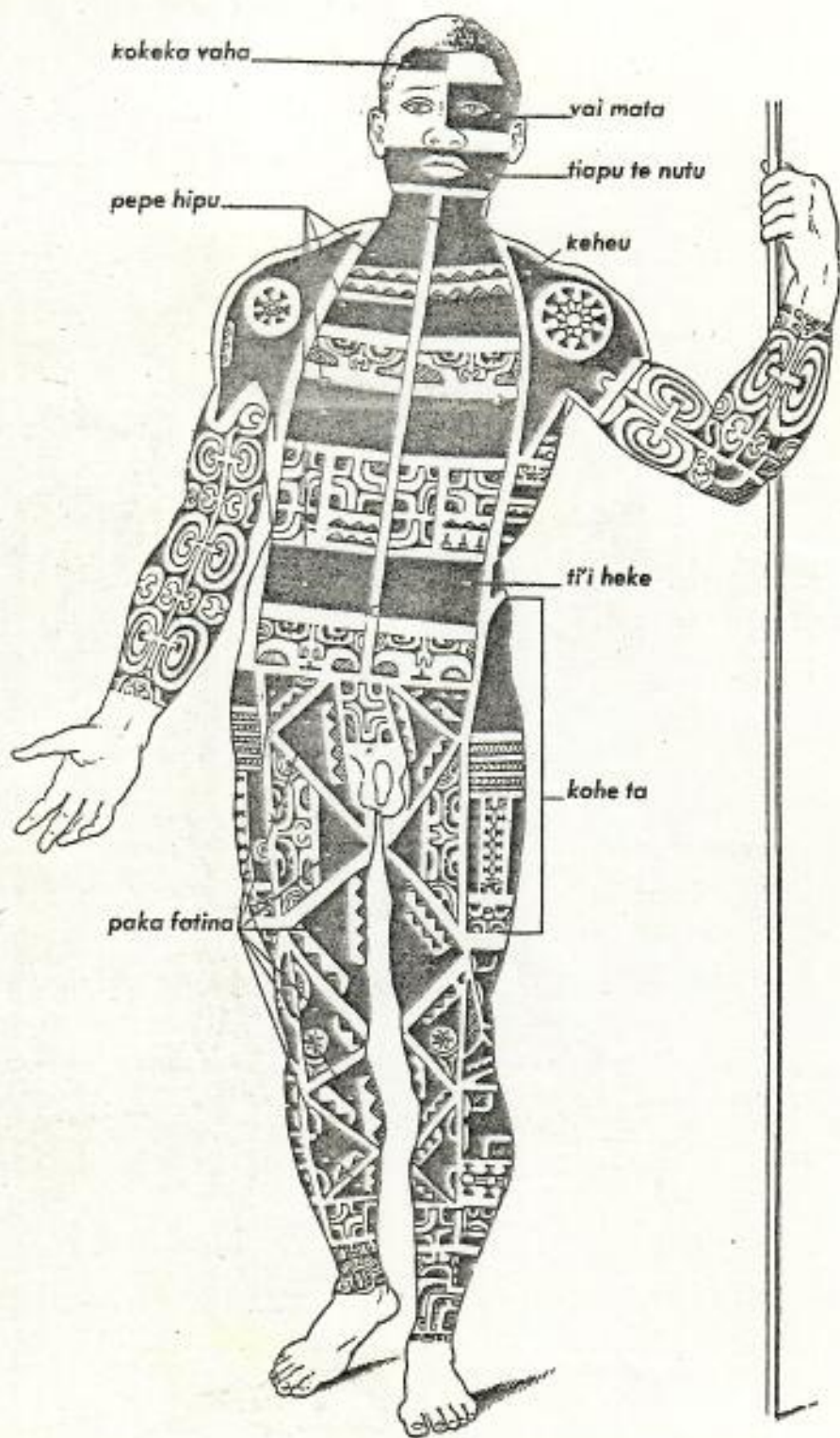


Fig. 13. Ventral patterns on Marquesan males.
 (Drawing from von den Steinen, 1925; additional nomenclature from W. Handy, 1922.)



Fig. 14. Dorsal patterns on Marquesan males.
 (Drawing from von den Steinen, 1925; additional nomenclature from W. Handy, 1922.)

names only the parts of the design. The side of the torso was decorated with bands containing intricate details.

The ventral surface of the shoulder and upper arm was imprinted with a panel called keheu (wing). The outer side of the arm was covered with five or six large motifs. The inner side was frequently decorated with a row of ipu 'oto (inside of bowl) (see Figure 15). On both sides of the hand horizontal rows of repeated motifs were imprinted, and often a large single design was put on the back of it.

The leg was encircled almost three quarters around with four or five horizontal rectangular bands crossed with diagonal lines and ornamented with elaborate inserts. The remaining inside front quarter was filled with large triangles, the paka fatina. A variant style on Muku Hiva applied all the leg patches in an oblique arrangement and inserted simple geometric shapes at only the edges. The foot was ornamented with small intricate repeated motifs.

The designs most commonly used to embellish the principal bands were: mata hosta (brilliant eye), ipu 'oto (inside of bowl), ka'ake (armpit), po'i'i (a coiled shellfish), pohu (a legendary person), ke'a (woodlouse), and hikihiku atu (tail of bonito fish). Each of these motifs was given considerable variation, as can be seen from Figure 15, and none of them was restricted to any one part of the body. Other, more simple patterns were composed from sets of small geometric forms, i.e., crosses, chevrons, and so forth.

Tattooing on females also was bilaterally symmetrical. Less of the body was ornamented than on males and there were fewer large solidly inked areas. The designs were arranged usually in horizontal

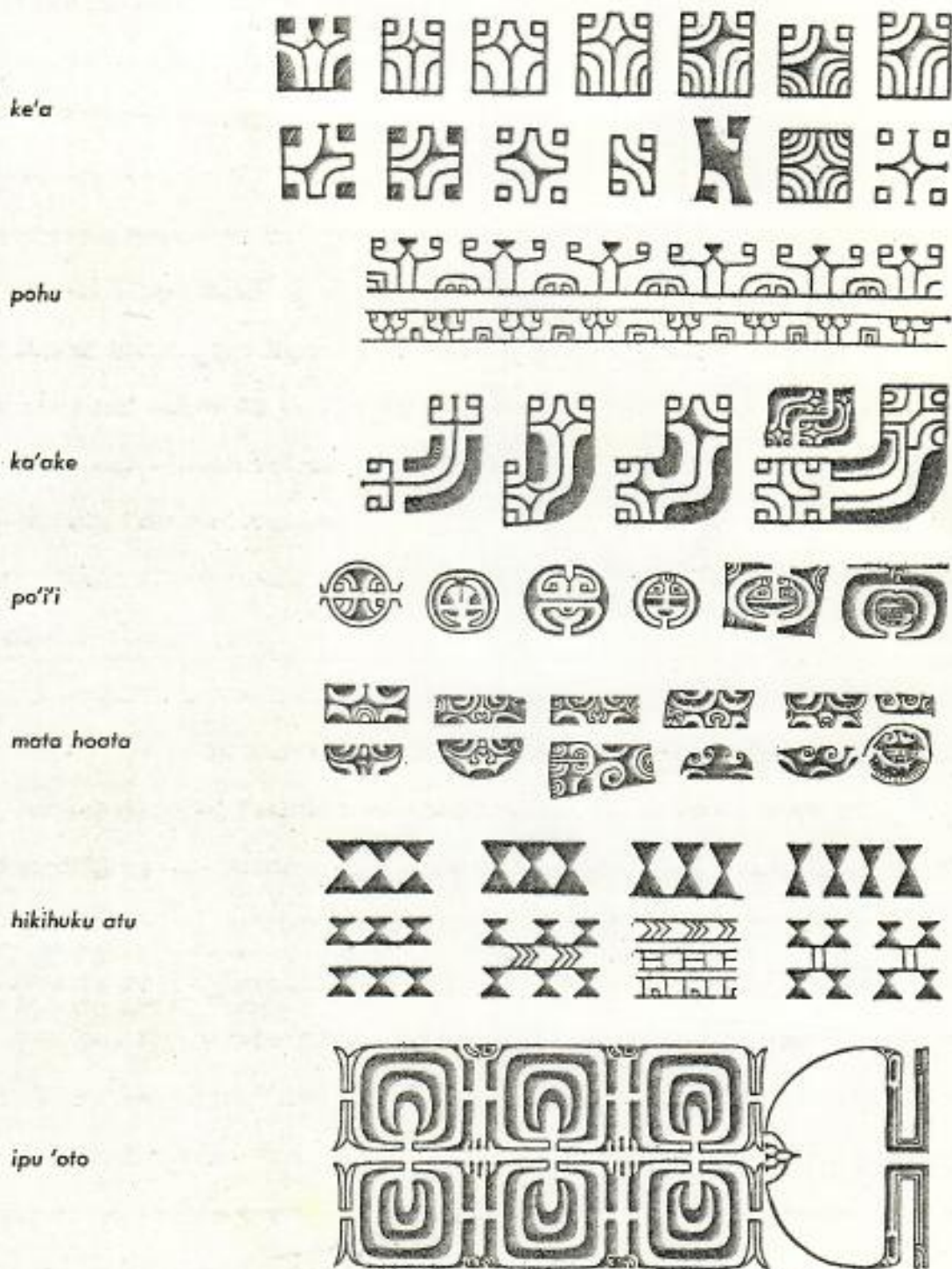


Fig. 15. Small motifs used in Marquesan tattooing
 on both sexes. (From von den Steinen, 1925.)

rows and were generally more delicate than those on men, although the same motifs were used on both sexes. On women, the rows and other groups of patterns were named for whatever small designs they contained.

The patterns have been described by W. C. Handy (1922:13-25, pls. ii, vi-xi, xv-xxviii) and von den Steinen (1925:128-136, abb. 56, 72-78), and a representative set are shown in Figure 16.

Across the mouth were imprinted vertical lines, the koniho, which continued behind the lips to the gums. Simple motifs were put on the ear lobe and below it on the neck. The arm from the deltoid area to the hand was ornamented much like that of the men. The leg from the hip at the level of the pubis to the foot was decorated with horizontal rows of motifs. Occasionally the shoulder and the lower back were decorated also.

A stylistic development in the tattooing on both sexes has been postulated by W. C. Handy for the 180 years previous to the abolition of the practice by French law. Her hypothesis is based upon the illustrations and brief descriptions published in the narratives of the early voyages and on the designs and information collected during her field trip to the Marquesas. In summary, it proposes that the patterns used in the southeastern islands gradually changed from "naturalistic" motifs to "geometric" designs, while the northeastern group retained the "naturalistic" forms but adopted some of the "geometric" shapes. Those patterns which she terms naturalistic and which are illustrated in her text are actually highly conventionalized and are constructed from geometric elements, while the designs she labels as geometric might more appropriately be called abstract. The existence of truly naturalistic patterns during this period of Marquesan tattooing is doubtful.

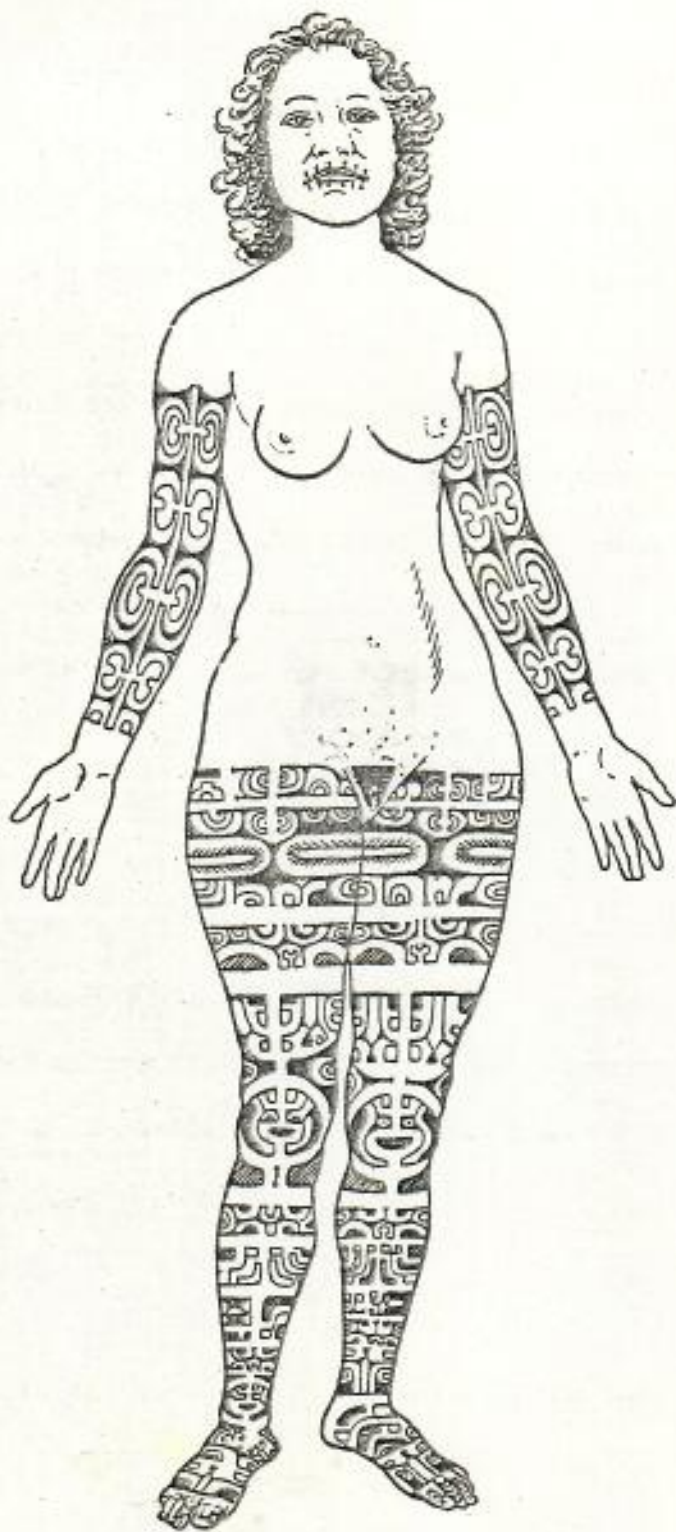


Fig. 16. Patterns on Marquesan females.
(From von den Steinen, 1925.)

Tuamotu Archipelago

Tuamotuan patterns show little similarity to those used in the nearby Society group. In the literature, tattooing has been described for only Anaa Atoll (Wilkes, 1846, v. 1:326, 333, illus. pp. 326, 329, 333; Hale, 1846:40; Christian, 1910:199). Christian suggests that the art was practiced on some of the other atolls but he does not name them nor does he discuss any of the patterns. Wilkes points out that the natives of Anaa frequently traveled to other parts of the archipelago, and consequently the tattooed persons seen on other atolls may well have been ornamented on Anaa.

Three patterns were used. The largest was a checkered design applied over the chest and abdomen from the sternum to the pubic region, and carried over the shoulder to the deltoid area (see Figure 17). Along the midline the pattern was edged with a stripe of solid inking which divided at the base of the neck and terminated under each ear. Wilkes saw a native on Aratika with only one side of the body so ornamented. Sometimes several narrow stripes were put on the lower back. The hips and thighs were ornamented with rosettes, which Christian states were sea urchins and other zoophytes.

Mangareva

Compared with the Tuamotuan style, more of the body was ornamented in Mangareva and a greater variety of designs was used. Tattooing on males was bilaterally symmetrical and employed large circles and groups of stripes. Most of the patterns covered large areas of the body from

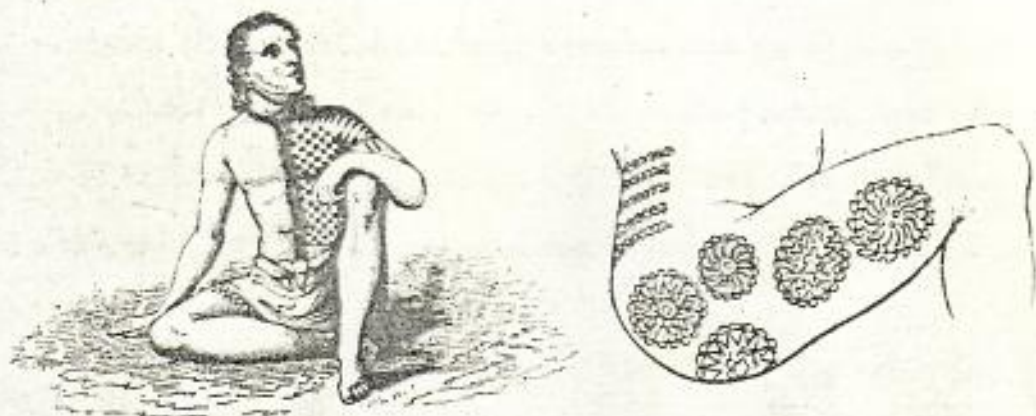


Fig. 17. Patterns on Tuamotuan males. (From Wilkes, 1845, v. 1.)



Fig. 18. Patterns on Mangarevan males. (From Beechey, 1831.)

the lower half of the face to the feet. They have been described by Beechey (1831:189-191, illus. facing pp. 142, 178) and Laval (1938: 237-238). Buck (1938:177, 180-182, fig. 7) reviews the accounts by Beechey and Laval.

At least three of the patterns were applied in sequence. Shortly after birth the hair of a chief was marked with several dots on the dorsum of the foot. On all other males the first design to be imprinted was a set of lines around the neck. The second was a pattern under the armpit.

Two styles are noted by Beechey. The names for some of the elements are given by Laval and they are used below, but much of this terminology merely refers to parts of the body. In the first style, "checkered lines," starting from a stripe which ran ear to ear over the bridge of the nose, extended down to the ankles, except on the chest which either was undecorated or had some other pattern on it. Beechey does not state whether this design was also applied to the dorsal surface. The second style consisted of sets of vertical stripes which ran from the waist to the ankles, and from the upper arm to the finger tips (see Figure 18). The pattern on the upper arm was termed koukupu, that on the forearm ko'ue rima (elbow), and the two on the wrist moko'e (frigate bird) and 'omu (turtle). The lines on the back of the hand were named rura and several parts were distinguished: rsu (leaves) on the back of the hand, para akairau on the fingers, and pare'e, a line running from the forefinger to the thumb. Some men had stripes which extended from the armpits and curved forward to the waist. It is not clear from the literature whether the four lines termed kaki (neck)

ordinarily endured for a longer time, was to some extent a consequence of patronal preferences.

The second influence arose from the importation by wealthy patrons of renowned tattooers from other localities. The visiting artist received his commission not only because of his skill but also because his designs differed from those of resident tattooers. These new patterns were undoubtedly viewed with interest by the local artists and probably influenced their own work to some degree.

Esthetic ideas which influenced the development of motifs came from both artist and patron. Essentially the same values were held by both, which is not surprising, for an artist participated in the culture to the same extent as others of his general social position, and the patron, from his side, understood the basic requirements of the tattooing technique. Furthermore, public judging of tattoos was performed by both artist and patron. The tattooer, nevertheless, exerted the greater influence on the art because he was its technician and more direct innovator.

Relationships with Other Graphic Arts

A number of graphic arts other than tattooing were practiced in Polynesia. The most common were designs incised in wood and stone and patterns printed or painted on barkcloth. In some localities, other types of rather unique ornamentation had been developed which employed an essentially linear kind of design, namely perforated turtle shell work in the Marquesas and feather work in Hawaii. Body painting was also practiced by Polynesians but little information on it is available.

illus. following p. 116). The puhoro design imprinted on the thigh (see Figure 11) was used also in painting the rafters.

On a number of maskoids and images, particularly those used on canoe prows, house gables, door panels, and boxes, the face was carved with imitations of facial tattoo (Hamilton, 1896: illus. p. 16, 41, pl. XVII, XVIII, XXI). Occasionally, even the buttock and thigh patterns were represented, especially on small supporting figures.

The ornate appearance of Marquesan tattooing can be seen on some of the objects fashioned from wood, especially bowls, clubs, and bamboo containers. However, the total effect of the tattooing--solidly inked panels alternated with sections of complex detail--was not duplicated in wood carving. Some of the motifs used in tattooing (see Figure 15) were applied to objects of wood but usually in simpler versions. Of these designs, the ipu 'oto was possibly the most common (von den Steinen, 1928:abb. 37, 209, 210). It was also used on a single barkcloth-covered image, the only such effigy reported from the Marquesas (Linton, 1923:pl. LXXIV-A).

The meta hoata and po'i'i patterns were also frequently executed in wood (von den Steinen, 1928:abb. 152, 179, 210). Often the turtle shell discs used as ornaments were perforated with either the ipu 'oto or po'i'i motifs (von den Steinen, 1928:abb. 155-157).

The only explicit imitation of tattooing made in wood was applied to rather realistically shaped legs (von den Steinen, 1925:abb. 70). Linton (1923:legend to pl. KLI-A) is of the opinion that these legs, which often had complete sets of leg tattoo, were used to support beds. If this was the case, the legs were either an innovation borrowed from

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TA TATAU

An act of bravery lives on.

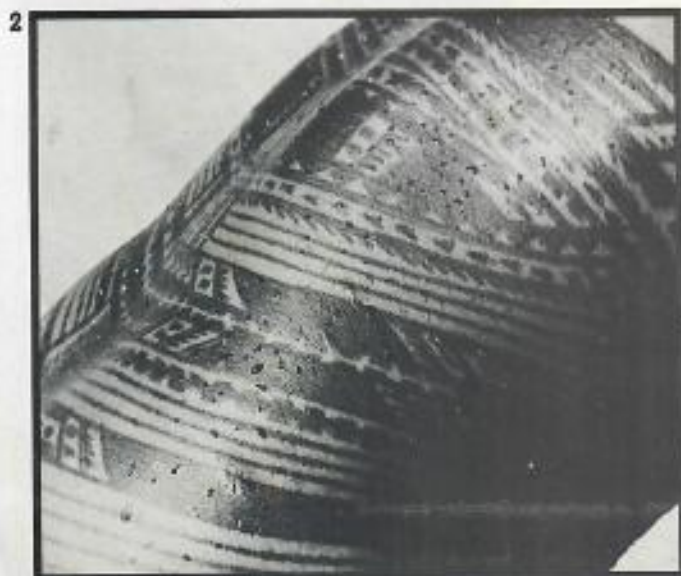
For centuries in old Polynesia the ancient art of tattooing was common. It was a mark of honour allowed only to persons of sufficiently proper status – usually the sons and daughters of chiefs.

BY ROB LAHOOD

But today, the people of Western Samoa are the only people of Polynesia to have retained the full tattoo designs of old. And the tattooing of women, (called ▶



Above: The traditional Samoan tattoo – today more than ever is the ta tatau, an act of bravery, a real test.



- 1) Above: A young Western Samoan proudly displays his newly completed traditional tattoo, featuring full waist to knees design.
 2) A close-up of the intricate tattooing of the lower thigh.
 3) The painful process of traditional Samoan tattooing. The design is scoured into the skin, followed by the administering of candlenut soot.

malu) once decorated on hands and wrists, is now extinct.

The traditional tattooing has always symbolized bravery — a young man's right to title and his approach of manhood.

Youths are usually tattooed when they are about 16 but unlike the old Maori tattooing in New Zealand they are usually decorated around the waist to knees, never on the face.



The operation — the ta tatau — is carried out by a craftsman — the tufunga ta tatau — usually in the presence of the father or the chief of the youth being tattooed. Because of the slow but sure break down of tradition in the country, youths today are compromising, opting for partial tattoos.

The ta tatau is carried out usually in the village of the subject. Implements include combs, tapping mallets, mortar, receptacles, bark cloths, water and candlenut soot.

The operation, depending on the fortitude of the subject, usually takes three or four days but often takes longer.

Coconut oil and turmeric (the powdered root) are rubbed over the tattooing to assist the healing. Scabbing, inflammation and swelling usually takes four to six weeks but there are few septic complications.

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BOEING

Digging Into the Increasing

By Sally Carpenter

DALLAS—Tattoos typically conjure images of brawny sailors, barroom brawls and forearms stained with former girlfriends' names.

But a new wave of young tattooists is changing the reputation as well as the substance of the ancient practice, a researcher says.

Huge Japanese woodblock prints are wielding a heavy influence on the new tattooists, many of whom hold degrees in fine arts, said Alan Govenar. At the same time, he said, tattoos are experiencing a popularity that transcends social class, sex and age.

Govenar, a 28-year-old Boston native, has studied American tattooing for seven years. He currently is pursuing a doctorate in arts and humanities at the University of Texas at Dallas.

He points to tattooist Ed Hardy of San Francisco as the leader of the creative new breed.

"He is bringing fine art to tattooing. He has done a lot to influence other young tattooists," Govenar said.

Hardy's designs include elaborate scenes of Samurai warriors and dragons, and "he specializes in large tattoos that, say, cover a person's back or chest."

Govenar entered the world of tattooing while an undergraduate student at Ohio State University in 1973, when he walked into the downtown Columbus shop of Leonard L. "Stoney" St. Clair.

THE TWO STRUCK up a friendship, and Govenar learned the man had been confined to a wheelchair since he was a child because of rheumatoid arthritis. St. Clair learned to tattoo after joining a circus as a sword swallower at

age 15. "He was a natural storyteller," Govenar said, and a paper he wrote about St. Clair for a class eventually developed into a book—"Stoney Knows How: Life as a Tattoo Artist."

The book was accepted by University Press at Kentucky in 1978, but has yet to be published, Govenar said. St. Clair never will see it—he died Dec. 3 after spending 51 of his 67 years tattooing.

"What drew me into tattooing was I discovered it was not what people thought it was," Govenar said. "I was committed to show tattooing as a folk art and a fine art. Also, there was a total dearth of material that had been written on the subject."

Govenar earned his masters' degree at the University of Texas at Austin in 1975, then hit the road in search of American tattooists. He visited more than 30 shops in 17 cities, and wrote several articles on the subject.

Govenar said he's found tattooists are "people

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Monday, January 19, 1981

gly Fine Art of Tattooing

Associated Press

who maintain very high standards. They only want to tattoo people who are serious about being tattooed."

THE NEW TATTOOS "are vastly different from the ones that Stoney did," Govenar said, with overtones of large 18th and 19th century Japanese woodblock prints.

"Tattoos in Japan have a completely different status," he said. "They stress symmetry, continuity, conformity to body contours. Western tattoos are more agglomerate, with many images placed often haphazardly. They often lack a unifying motif."

The National Endowment for the Arts provided funds for a documentary, scheduled for release this month, on the "old school of tattooing."

Govenar also has written a novel about tattooed people, "Done Up," that he's trying to get published.

He said he's now working on two more films about tattooing. Other projects include an investigation of tattoos' place in Mexican-American culture and "the multitude of meanings tattoos have and can have."

Executives, as well as women, increasingly are joining the ranks of the tattooed, Govenar said, adding that tattoos are beginning to come out from beneath clothing.

Even with the burgeoning popularity, he said, tattooed people still are "oppressed by stereotypes. Oftentimes, they are discriminated against because they have a tattoo showing."

EVEN THOUGH Govenar has no tattoos himself, he said that doesn't mean he won't ever have one.

"I don't have any objection to getting a tattoo. If and when I get a tattoo, I want to be sure—I want to get something that will really say a lot and that will have a lot of meaning for me."