
A Force to be Reckoned With in Borneo: Tom Harrison and His Herpetological Legacy

C. Kenneth Dodd, Jr.

Department of Wildlife Ecology and Conservation, University of Florida, Gainesville, FL
32611, USA, Terrapene600@gmail.com

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Few people today could ever imagine a life even remotely similar to that lived by Thomas Harnett Harrison (26 September 1911–16 January 1976) (Figures 1, 2). There are many accounts of his accomplishments: master organizer of ornithological information prior to attending university and while mostly otherwise inebriated at Cambridge (1930–1932, never graduating); Oxford University expeditions to Arctic Lapland and the Outer Hebrides (1930–1931); Oxford University expedition leader in Borneo (1932, at age 21) (Harrison, 1938) and to the New Hebrides (1933–1935) (Harrison, 1937, 1943); founder of Mass Observation, the first attempt to analyze national public opinion using a modern survey and observational approach (1935–1942) (Madge and Harrison, 1939; Harrison, 1961a, 1976a); guerilla leader and post-war administrator in Borneo during World War II (1942–1946) (Long, 1989; Courtney, 1993); curator of the Sarawak Museum and government ethnologist (1947–1966) (Das, 2003; Harrison, 1959a, 1959b,

1963a, 1970); holder of appointments to Cornell University and the University of Sussex (1967–1976). Never to be satisfied by a single pursuit, he became an authority on Southeast Asian ethnography, anthropology, archeology, paleontology, guerilla warfare, social data analysis, and conservation.

Harrison legends are many, particularly those associated with his years spent in the New Hebrides and Borneo. He spent a year (1933–1934) “going native” on Malekula Island in the New Hebrides in order to immerse himself in the cannibal cultures of Big Nambas and Laus societies (Harrison, 1937, 1943), during which time he was described as looking like Jesus Christ, wearing only a native cloth around his waist, no shoes, long hair, a beard, and carrying a staff (Heimann, 1999). He served as Acting District Agent in the British Colonial Service for the northern New Hebrides, successfully pacifying the Big Nambas. He made a classic documentary film on the natives of New Hebrides in cooperation



FIGURE 1. Tom Harrison at Talang-Talang Island, 1961. From left to right: observing hatchling green turtle (*Chelonia mydas*); recording field observations; releasing hatchling green turtles. Photos courtesy of the Sarawak Museum (reprinted with permission).

with Douglas Fairbanks Sr. With a small number of Australian commandos, he organized a native army in Sarawak to effectively restrict the Japanese to coastal areas during WWII and contain isolated Japanese forces after the surrender. In 1962, he led a native force of Kelabits and Dyaks from Sarawak to help put down a rebellion in Brunei. He became an expert in Asian ceramics and, in 1958, he discovered the then oldest known human skull (ca. 40–44,000 years BP; Barker et al., 2007) at Niah Great Cave on Borneo.

Along the way, Harrison received the Distinguished Service Order (D.S.O., 1947) for service in WWII, Officer of the Order of the British Empire (O.B.E., 1959) for his work as curator of the Sarawak Museum, the Royal Geographical Society Founder’s Medal (1962), and a Palm d’Or at the Cannes Film Festival for his documentary film *Birds and Nest Soup* (1957), one of six films he produced on the wildlife and peoples of Borneo. His life is recounted in fascinating detail by his biographer and former neighbor in Sarawak (Judith Heimann, 1999) and in a six-part BBC4 documentary narrated by David Attenborough entitled *Tom Harrison – The Barefoot Anthropologist* (2007; available online at <https://www.youtube.com/watch?v=SVtGT6g4-64>). Additional information and reminiscences are in many obituaries and newspaper articles

(e.g., Chin, 1976 and others in the same issue; Hutchinson, 1976; other essays and recollections recounted by Heimann, 1999).

By all accounts, Harrison was a difficult person to be around or for whom to work. In interviews in the BBC4 biographical documentary, he is described as a classic British eccentric, a drunkard, arrogant, chauvinist, belligerent, confrontational, competitive, prone to rages, a bully, and an individual who loved to shock contemporary mores. While at Cambridge in the early 1930s for example, he painted his toenails with bright nail polish and walked around campus in open-toed shoes (Heimann, 1999). At the same time, he was fiercely protective of his soldiers and employees if anyone in higher authority or from the “outside” (politicians, administrators, military

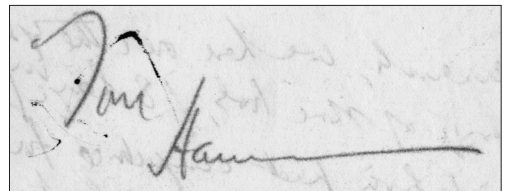


FIGURE 2. Tom Harrison’s signature on letter to Nicolas Mrosovsky discussing matters related to the IUCN Marine Turtle Specialist Group, 7 February 1974. Tom Harrison Papers, Special and Area Studies Collections, George A. Smathers Libraries, University of Florida, Gainesville, Florida, USA.

commanders in particular) questioned their abilities, loyalty, or character. Unfortunately, those under his thumb rarely saw this side of him and many came to despise him. For example, during guerilla operations in the Borneo interior, he refused to let his men wear shoes, knowing that if the Japanese observed boot prints they would know non-native operatives were in the area. He further refused to allow his men access to parachuted food supplies and made them live off the land. While this caused great animosity and outright hatred among the soldiers, it won admiration from his native Kelabit warriors who accepted his command with respect. None of his Australian soldiers were ever killed or captured, and the native warriors proved vital to the success of Allied military operations. Harrison was far more interested in outcomes than in the personal sensitivities of enlisted men or officers, staff, or established academics.

Not all of his contemporaries despised him; some thought him brilliant, insightful and dedicated (e.g., F. Wayne King, personal communication, described him as a good friend). Harrison corresponded extensively with academics (who often looked down on him because of his lack of any academic degree), social scientists, writers, adventurers, interested persons, and government officials. Kraig Adler (personal communication), for example, recalls corresponding with him and Neville Haile in the late 1950s and early 1960s when Adler was still in high school. Haile would send him little boxes with live reptiles, including a slug-eating snake and a baby monitor lizard. These came unannounced, and the animals were never held in a bag inside the box. When Adler arrived home from school one day, he found a box awaiting him with a very active lizard scratching to escape.

Harrison's correspondence with sea turtle biologists (notably Archie Carr, Robert Bustard, David Caldwell, George Hughes, E. Balasingham, Nicholas Mrosovsky, J.P. Schulz) was free of acrimony and was professional.

He readily exchanged observations, asked questions, and occasionally corrected errors in publications without the venom he was known to direct toward others (Tom Harrison Papers, Special and Area Studies Collections, George A. Smathers Libraries, University of Florida, Gainesville, Florida, USA). Although he freely exchanged information, he was resentful when "his" ideas turned up in the writings of others.

Harrison's confrontational personality won him no friends wherever he went, especially when he challenged established authority or ideas (Heimann, 1999). This was particularly true of colonial Britain from the 1930s–1950s. He was intensely interested in protecting native cultures rather than characterizing them as savage or uncivilized. Indeed, the title of his book *Savage Civilisation* (1937) refers not to the natives of New Hebrides, but to Western Civilization intent on "civilizing" them. He could only understand native cultures by immersing himself within their societies, not by looking in from the outside with preconceived ideas and methodology. To this day, his memory is revered in the highlands of Borneo because of the respect he showed for Kelabit culture both during and after WWII (see aforementioned BBC4 documentary).

Harrison later adapted his total immersion approach to understanding culture within England, recording the thoughts and behavior of the common people rather than the rigid English intelligentsia. Although his books were often quite popular, they were also frequently criticized or dismissed by the academic or political establishment, especially when his conclusions did not fit into accepted ideas or the political ideology of the day. History has shown, however, that he was more often than not correct, and much of his approach to anthropology and social science research was far ahead of its time (Heimann, 1999). Harrison was married three times to Europeans, including the well-known orangutan conservationist Barbara Harrison, but he also had a "local"

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Kelabit wife. He and his third wife Christine were killed in a road accident in Thailand on 16 January 1976 while returning from a vacation at a game reserve.

Tom Harrisson was not a herpetologist, but he conducted some of the earliest work on three species of sea turtles and the Borneo earless monitor, *Lanthanotus borneensis*. As Curator of the Sarawak Museum, his duties extended to editorship of the *Sarawak Museum Journal* as well as administrator of the green turtle (*Chelonia mydas*) egg collection industry on the three Turtle Islands (principally Talang Talang Besar and Satang Besar; now Talang-Satang National Park) off Sarawak's southwest coast (see Hendrickson, 1958, for a history of egg collection in the Turtle Islands). He also had responsibility for protecting national parks, game reserves, and ancient monuments. With these duties, he enlisted local help (Neville Seymour Haile, a geologist, was made honorary curator of amphibians and reptiles) and encouraged research by professional scientists.

For example, Robert Inger (Field Museum of Natural History), who first visited Harrisson in Borneo in 1950, gained insights into Bornean natural history and culture from discussions with Harrisson, and often received logistical assistance from him on subsequent research projects (Inger, personal communication). Inger later brought one of his graduate students, F. Wayne King, to Borneo who spent six months there studying the herpetofauna (recounted by Heimann, 1999). King (personal communication) suggests Harrisson's advice and assistance might be considered part of his herpetological legacy, leading to the description of a new gecko (Inger and King, 1961), identification of Paleolithic amphibian and reptile remains from Niah Great Cave (King, 1962), a summary of the diversity of amphibians and reptiles in Borneo (Lloyd et al., 1968), insights into squamate evolution (Mertens, 1961, 1962), and Inger's (1966) first monograph on the amphibians of Borneo. While

Harrisson allowed some researchers to conduct studies in Borneo, however, many others were denied permission whom he felt would offend any of the indigenous cultures (F.W. King, personal communication). *Rhacophorus harrissoni* is named in his honor (Inger and Haile, 1959).

Harrisson assumed oversight and management of egg collection in the Turtle Islands in 1947, although he may have become interested in green turtle nesting there on his first trip to Borneo (de Grandmaison, 1964; this article gives a date of 1935, but it seems likely 1932 was correct inasmuch as Harrisson was in the New Hebrides in 1935). He immediately became concerned that the then current way eggs were being collected and distributed had no basis in biological knowledge, and he instituted a management protocol that required a portion of the eggs to be reburied in protected hatcheries to ensure some recruitment. Already in the mid-1940s, the number of nests deposited appeared to be in decline, and that decline continued after Harrisson took over. In 1951, he invited John Hendrickson from the University of Malaysia to begin a systematic study of the life history of green turtles. Nothing at that time was known of green turtle life history in Southeast Asia, not even the most basic information on population size, foraging and interesting habitats, the number of eggs deposited per female per season, or migration patterns.

Hendrickson initiated an ambitious program, including the first use of monel metal cattle ear tags that could be attached to a turtle's flipper for subsequent recognition without being lost to corrosion. In the first extensive tagging season (1953), ca. 1,500 turtles were tagged, and by program's end in early 1955, more than 4,000 turtles had been tagged (although Hendrickson later recalled only 2,720; Rieser, 2012). Hendrickson published the results of his research in an extensive paper (1958), a classic in the early life history studies of green turtles. The relationship between Har-

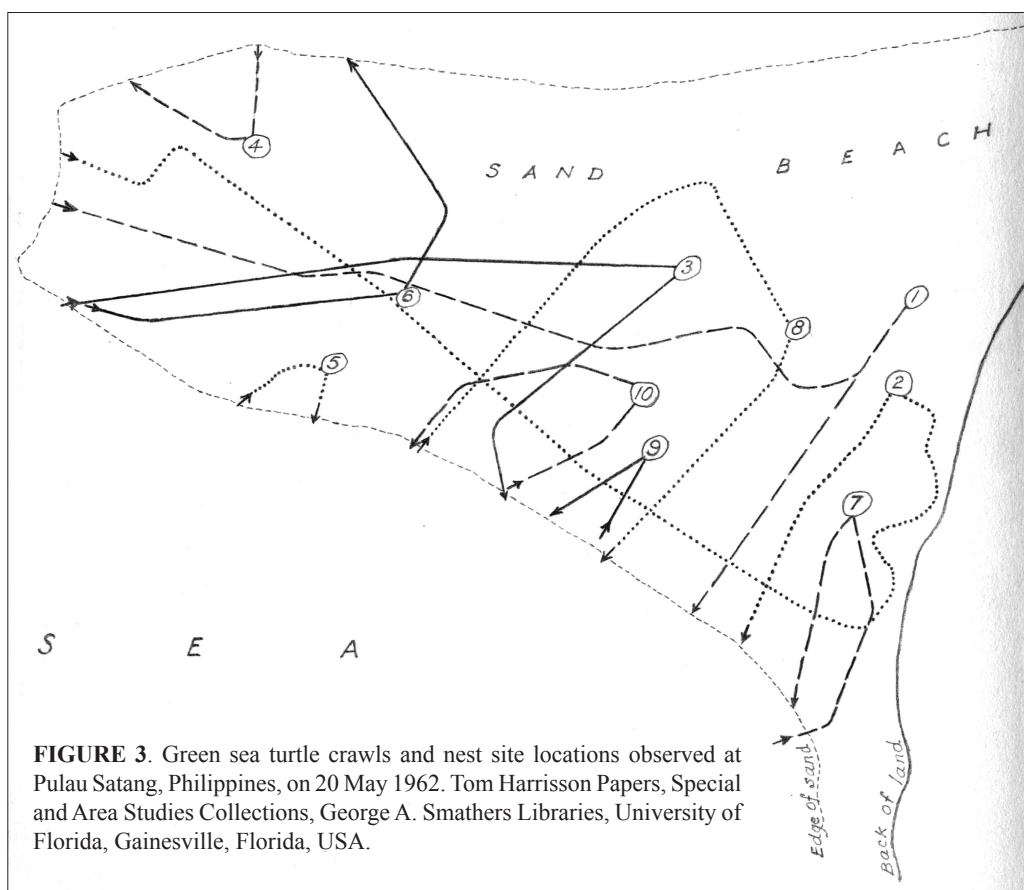


FIGURE 3. Green sea turtle crawls and nest site locations observed at Pulau Satang, Philippines, on 20 May 1962. Tom Harrison Papers, Special and Area Studies Collections, George A. Smathers Libraries, University of Florida, Gainesville, Florida, USA.

risson and Hendrickson was not harmonious, however, as Hendrickson accused Harrison of using his field notes and data and publishing quick summaries in the *Sarawak Museum Journal* and *Nature* (Heimann, 1999; Reiser, 2012). This seems a possibility. Harrison had a long-standing habit of sometimes not giving full attribution to observations made by others acquired under his supervision. The situation was not helped when Carr and Caldwell (1956) mistakenly attributed the first use of monel tags to Harrison rather than Hendrickson (Rieser, 2012). Curiously, there is no correspondence with Hendrickson in the Harrison Papers, nor any mention of Hendrickson's work except for illegible notes on a copy of Hendrickson's observation on thermal ecology.

The question of authorship may not always be that simple, however. Harrison never traveled in the field without his notebook, and if he did not have his notebook he appeared to use whatever scrap of paper available. The Tom Harrison Papers at the University of Florida are filled with field notes and trip reports recording a wealth of information gathered during his many trips to the Turtle Islands and elsewhere in Asia. Harrison's handwriting is nearly illegible, but fortunately many of his notes and reports were typed later and are included with the originals. The majority of observations were on green turtles, but he also recorded data on hawksbills (*Eretmochelys imbricata*) and "loggerheads" (*Lepidochelys olivacea*, using the common local name of the time). He frequently included tables with data and illustrations depicting such observations as the number of eggs, size of turtles, crawl

paths, and the locations of nests on a beach (Figure 3). In the Harrisson Papers, there are even receipts for expenses incurred during field trips. Harrisson's excursions did not always involve work, as both he (Harrisson, 1964e) and Heimann (1999) recount the raucous drunken Semah feast that was held annually in connection with the Sarawak Turtle Board's meeting each May. Let's just say, it involved a great deal of alcohol, a battle of rotten green turtle eggs, singing, all-night dancing, and a many course native feast.

Harrisson's papers in the Sarawak Museum Journal (see bibliography) and, especially, his publicizing of the plight of the green turtle to Europeans (Harrisson, 1962a, 1964b, 1964c) caused considerable attention to the harvest of green turtle eggs and adults, both in Sarawak and worldwide, and the likely effects it was having on wild populations. The response was immediate, with many individuals from the public and biological community expressing concern and those engaged in turtle harvest expressing outrage, claiming that harvesting had no effect whatsoever on the status of the species (correspondence in the Tom Harrisson Papers, Special and Area Studies Collections, George A. Smathers Libraries, University of Florida, Gainesville, Florida, USA). Harrisson's response often was terse and did not allocate commercial interests any credibility (e.g., Harrisson, 1964d). His studies and ideas readily influenced Archie Carr and others (Reiser, 2012) and led to his appointment as IUCN Marine Turtle Specialist Group (MTSG) co-chair with Carr in 1974. Harrisson played an important role in reorganizing and revitalizing the MTSG.

Harrisson published most of his observations on sea turtles in the Sarawak Museum Journal (a series of 18 "Notes on Marine Turtles") with another 10 in other outlets. Additional papers addressed green turtles found in archeological sites (Harrisson and Medway, 1962) and the use of sea turtle bones in ceramics or as tools to shape ceramics (Harrisson, 1965b, 1966a,

1968, 1969c). He also published many articles in local and international news outlets describing his research or pointing to the decline of sea turtles and need for protection (see bibliography). Two papers addressed other reptiles (Harrisson and Haile, 1961a; Harrisson, 1966b), and an unpublished book manuscript entitled *Turtle Island* is in the Tom Harrisson Papers at the University of Florida (Figure 4); a note says the book was to be published by Wiedenfeld & Nicholson in 1967 (letter to George Hughes, 31 May 1966), but it never was. Manuscripts were written and revised in almost illegible script (Figures 5, 6).

Harrisson with N.S. Haile and his wife Barbara was among the first observers to record basic information on the little-known Borneo earless monitor based on wild-caught specimens (6 papers). Tom discovered that when pepper farmers tilled their crops they dug up *Lanthanotus*. He then offered a monetary reward to any farmer who caught an earless monitor alive (F.W. King, personal communication). No one knew what *Lanthanotus* ate, but because they were fossorial, biologists thought they fed on earthworms or similar prey. Tom tried to keep them alive on a variety of diets, one of which was sea turtle eggs. He claimed the monitor ate raw egg offered in an open dish, but in fact the lizard simply crawled through the egg and smeared it in the sand (F.W. King, personal communication). In 1963, Harrisson sent four live *Lanthanotus* to Robert Mertens at the Senckenberg Museum in Frankfurt, Germany, where it was discovered they spent much of their time in water and would eat strips of North Sea plaice (*Pleuronectes platessa*), and later cod (*Cadus morhua*) (see Mertens, 1964, 1966). Although two of the *Lanthanotus* had died prior to the introduction of fish, the remaining two were alive at least through 1966 (F.W. King, personal communication). Tom also sent a live *Lanthanotus* to Wayne King, then at the Bronx Zoo, where it also ate fish cut in strips. The diet in the wild is still said to consist of earthworms and crustaceans (Das, 2010).

TH. 22 July 1969

TURTLE ISLAND : Contents (Revised)

PART A - A SEA OF TURTLES

define water with island
before departure
look for (SR) (at night)
shells with island

Don't miss islands of Cape of K. ...
while ATMs ...

part taken into IV

I. The Talangs: In Great Bay.
 Mainland Borneo: west coast; Mt. Poi.
 Sematan's fishermen, sail, cf. steam.
 The Islands set in coral sea; climate, rocks
 Beaches and Coconuts.
 Fauna and Flora.

II. Turtled Islands: Beach Scene, August & March 1950.
 The turtles (species).

III. The Turtle-watchers: Nundin, Sepian, Jahaya.
 Semah, beliefs, Islam.

IV. The Sea: How the female finds the islands.
 Sea and shore factors: monsoon, tide, salt, silt, season etc.
 Senses and disturbances.

V. Eager Bull in the Channel: Copulation, sex ratios.

VI. ASHORE: Crawl, dig, lay, the nest;
 clutch, cover, back to sea - and away...
 Nocturnalism and day.
 Repeat nesting; tagging returns.

VII. The Eggs: To Kuching and sale: profits, organisation.
 To replant (and why); conservation (how done and results).
 Flagging, boxes, wild nests left...
 Temperature and nest climate; inarticulation; fertility.

VIII. Hatchlings: Hatchling emergence;
 To sea and on; experiments; sight, colour.
 Tanks, growth, health, food, predation.

IX. The Years Cycle: Seasonality and its effects: cf. weather. stars

FIGURE 4. Portion of the table of contents for a planned but never published book entitled *Turtle Island*. Tom Harrison Papers, Special and Area Studies Collections, George A. Smathers Libraries, University of Florida, Gainesville, Florida, USA.

One might think that the title of Curator would involve collecting and properly managing the zoological collection at the Sarawak Museum, but that was not the case. Harrison collected reptiles only incidentally to his mammal collections; these were reported on by Tweedie (1949). Under Harrison's directorship, the collection deteriorated. Many of the specimens were of great historical value, yet specimens rotted without appropriate care. Harrison did not personally add specimens to the

zoological collection, and the ledger of collections from the Museum shows hardly any entries during his time. Specimens that were donated were often accepted without data. For some important specimens, only pencil-written notes on the back of cigarette wrappers were thrown into alcohol bottles (I. Das, personal communication). Clearly, Harrison either lacked knowledge of proper herpetological curation techniques, or he just chose to ignore them and the specimens.

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FIGURE 5. Notes on Borneo insect migrations between the Sarawak mainland and Tulang Tulang Besar with signature. Tom Harrisson Papers, Special and Area Studies Collections, George A. Smathers Libraries, University of Florida, Gainesville, Florida, USA.

Today, the legacy of Tom Harrisson is debated, but it seems clear that he was a force to be reckoned with for sea turtle conservation at a time when it was desperately needed. Even without academic credentials, he had the foresight to identify research gaps necessary to manage populations, and if he could not do the work himself, he was able to encourage highly innovative scientists to start it. He was certainly a pioneer in sea turtle research when very few individuals were in the field attempting the seemingly impossible task of gathering life history data on such wide-ranging and enigmatic reptiles. His insights were often ahead of his time. For example, on one of his unpublished reports he speculates on what might drive hatchling sea turtles to the ocean. Was it an innate sense, the depth and slope of the beach, magnetic fields, reflected light, the sound of waves, or something else? All of these mechanisms have now been examined, and each plays a role in the life history of adults and hatchlings (e.g., Lohmann et al., 1997; Lohmann et al., 2013). Much of the ambivalence concerning his contributions likely stems from his abrasive personality, although only a few biologists are alive today that directly interacted with him. It seems probable that a thoughtful retrospective of his contributions

T1

Borneo Insect Crossing to Islands
Sea
by
Tom Harrisson

Very
little is known about insect flights &
migration in the Archipelago, but I was
ventured to read the literature on
the subject and the evidence suggests
that many of the 12 year periods
of migration along a particular
island of the North Borneo Sea
I have reported to cross seasonally
by day - a ball of ~~light~~
3-6 miles deep by night
the birds wash of sand & the turtle
shells - (I believe to be the turtle
shells) - (I believe to be the turtle
shells)

I have only seen two insects which
could reasonably be regarded as

FIGURE 6. Draft manuscript with corrections on the size and weight of hatchling “loggerheads” (*Lepidochelys olivacea*). Tom Harrisson Papers, Special and Area Studies Collections, George A. Smathers Libraries, University of Florida, Gainesville, Florida, USA.

Size Weight
235 - weight of baby loggerhead (at 27.6.65, alshby)
A - 2 days old (the measurements are of the head)
Hatched on Saturday 25.6.65 at 4.30 am.
43 young, out of 103 eggs (incub 6.5.65 = 58 days)
These 43 young weighed on 27.6.65 (at 8 am = 2 days old)
- average regularly 5 gm 2 3/4 oz or a
notable loss (over 5 gm 2 1/2 oz)
Subsequent individually 1 in 4 so a good
over 1/2 oz, ~~at 1 in 3~~ at cloudy dawn;
first just ~~at~~ with 2 oz water.

Check 43 first 21 ounces (incub 6.5.65)

Compare here to loggerhead
43 = 21 ounces at 2 days +
and these in same manner (2-3 day)
42 = 34 ounces at 4 days, 1st day,
h.b. (but not 6.5.65) any loss - c/eff. fac.
[MS here 43 have 51 photos taken then (at 1/2 R of 43 each)
in water - loggerhead - 1/2 ounce or less
Green - 2/3 oz + (at 1 day)
Loggerheads (reweighed) 27.6.65 at 6 pm = 23 eggs per tri =
80 gms weight (at 15 below)

1/2 2 months old loggerhead X
Compare here 2 months old (hatched 14.6.65 to
25.5.65) 25.4.65 - av. weight
1 1/4 ozs. each (at 15 on p 2)
- a little over
This is another example of 2 months -

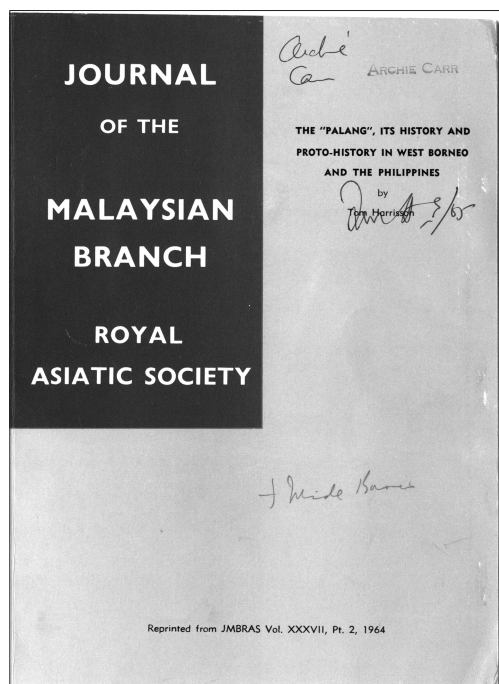


FIGURE 7. Inscribed reprint from Tom Harrison to Archie Carr. Tom Harrison Papers, Special and Area Studies Collections, George A. Smathers Libraries, University of Florida, Gainesville, Florida, USA.

will result in a more balanced assessment of his accomplishments and failures, as it has in ethnography and anthropology (see Epilogue in Heimann, 1999).

NOTES

The Tom Harrison Papers archived in the Special and Area Studies Collections, George A. Smathers Libraries, at the University of Florida consist of 8 boxes of material (correspondence, field notes, manuscripts, published papers, newspaper articles) relating to Harrison's activities with sea turtles and as IUCN MTSG co-chair. Some of these papers were sent to Archie Carr in 1975 by Harrison's ex-wife Barbara. Following Harrison's death, Carr accepted additional Harrison papers. After Carr died in 1978, these were presented to the Smathers Library by Marjorie Harris Carr, Archie's widow. A general listing of the con-

tents of the Harrison papers is available online (<http://web.uflib.ufl.edu/spec/manuscript/guides/Harrison.htm>). It appears that Harrison frequently sent Carr reprints on a variety of subjects (Figure 7); some of these are in the Tom Harrison papers, but others are in the herpetology library at the Florida Museum of Natural History. The University of Florida has a complete set of the *Sarawak Museum Journal*, likely originating from the Carr-Harrison collaboration. Harrison frequently sent copies of the journal to colleagues.

Citations of Harrison's papers are frequently confused in the sea turtle literature; even Harrison sometimes incorrectly cites his own publications. This may result from the difficulty in obtaining original copies of the *Sarawak Museum Journal* or the fact that the journal sometimes included both old series and new series numbering in the same issue. Photographs were not on numbered pages, and sometimes were placed in different locations in the journal, perhaps to include them together for ease of publication. Some publications on *Lanthanotus* that have been attributed to Tom Harrison were actually published by his second wife Barbara (e.g., B. Harrison, 1961, 1962). The *Sarawak Museum Journal* also includes Tom Harrison as author of a paper on snake bite in the table of contents of Volume 11, but the actual author was N.S. Haile (Haile, 1963). In order to eliminate confusion, a complete, verified bibliography of Harrison's herpetological publications is provided as an appendix.

ACKNOWLEDGEMENTS

I thank the library staff at the Smathers Library, University of Florida, for access to the papers in the Tom Harrison archive. Ipoi Datan, Charles Leh Moi Ung, Ron Orenstein, Ian Swingland and Eileen Yen provided much needed assistance in finding photos of Harrison. W.B. Barichivich assisted in photo formatting. Kraig Adler, Indraneil Das, Marian Griffey, Robert Inger, F. Wayne King, André

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