HPU-5 STRETCH +

13-19 JANUARY 2025

Mead
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COMPOSITION

100 sheets

2025-2026

GEORGE BALAZS I - 808 683 8402

WIDE RULED

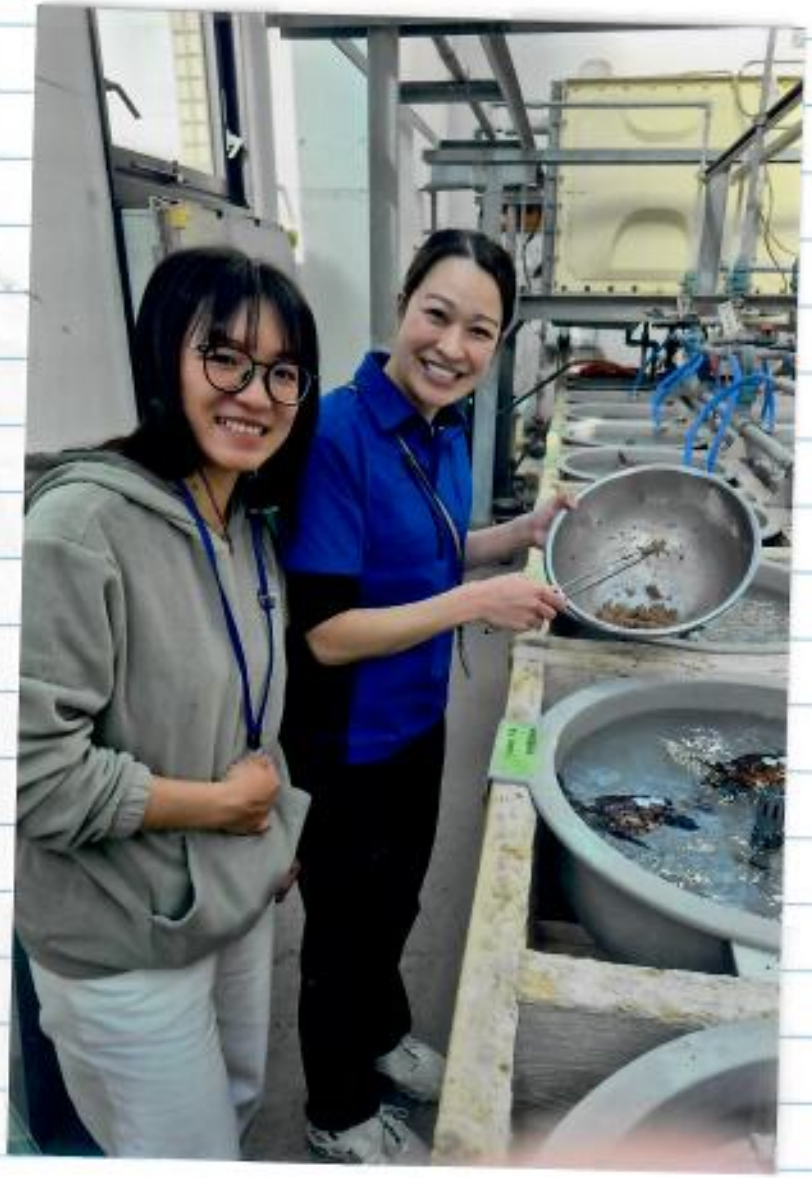
WILDLIFE COMPUTERS

- P.I. MEET
- HPU 5TH: STRETCH
SEA TURTLE WORKSHOP
9-10 OCTOBER 2025

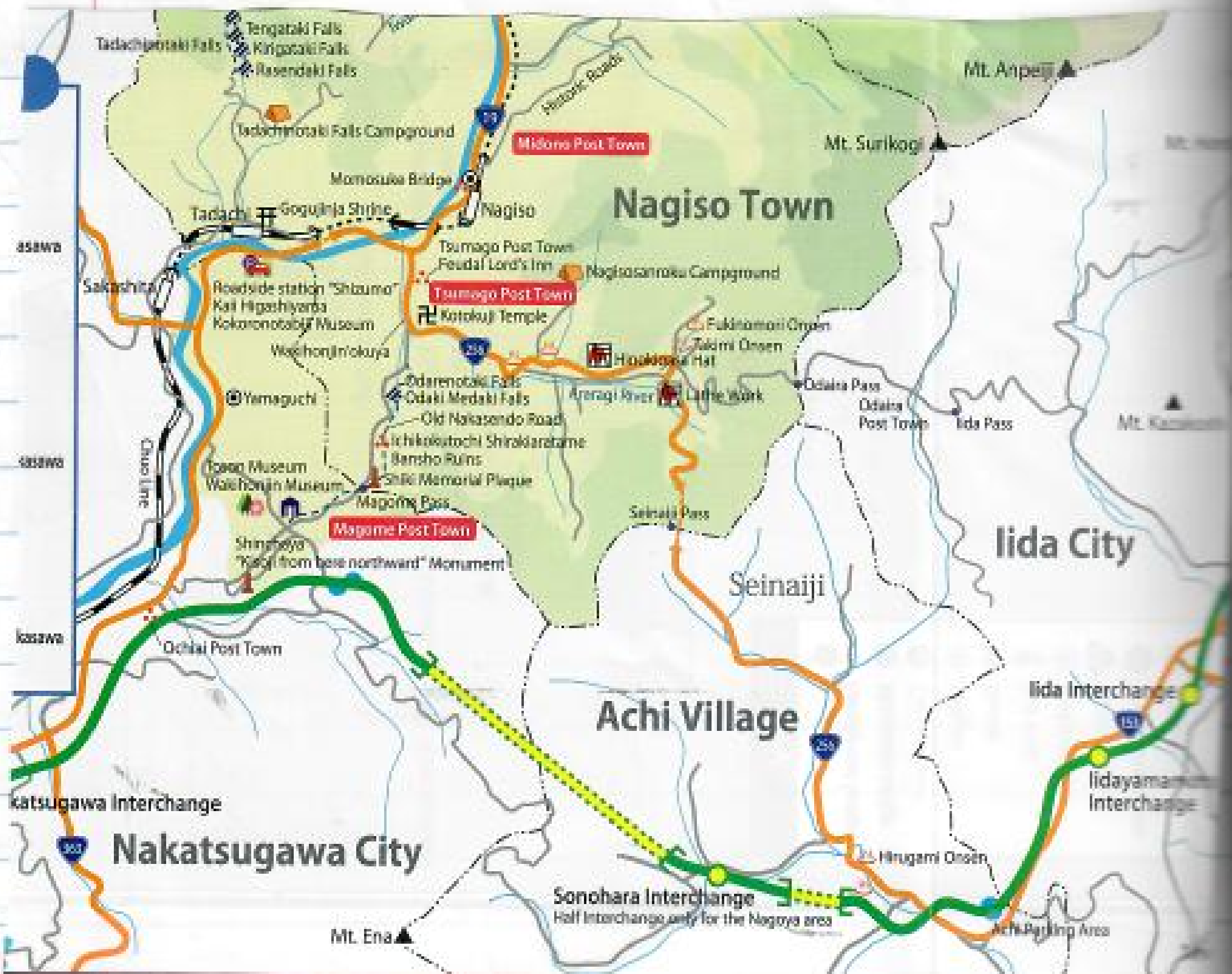
PART 2 OF 2


媽祖廟

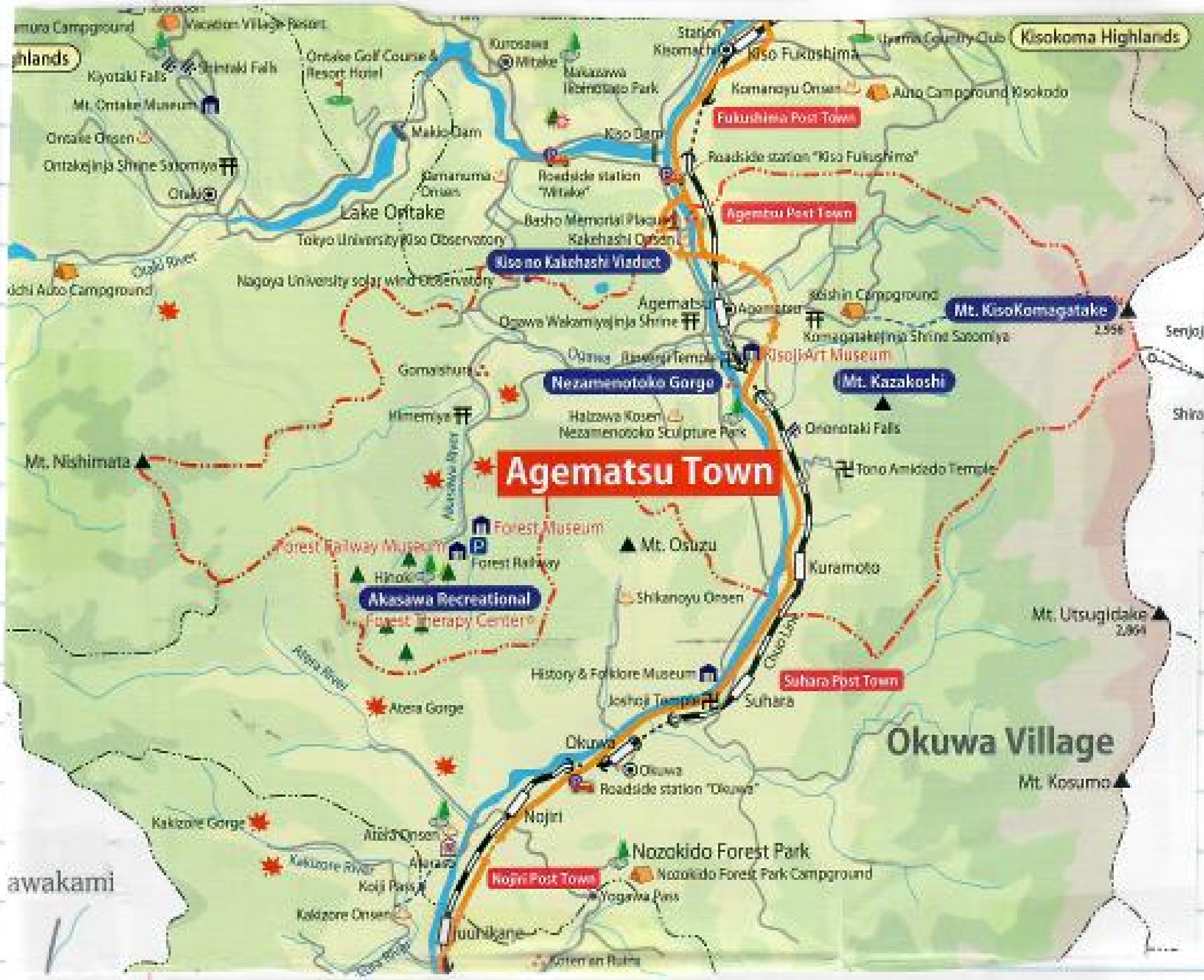
13-19 JANUARY 2026 (98)
Tuesday Monday



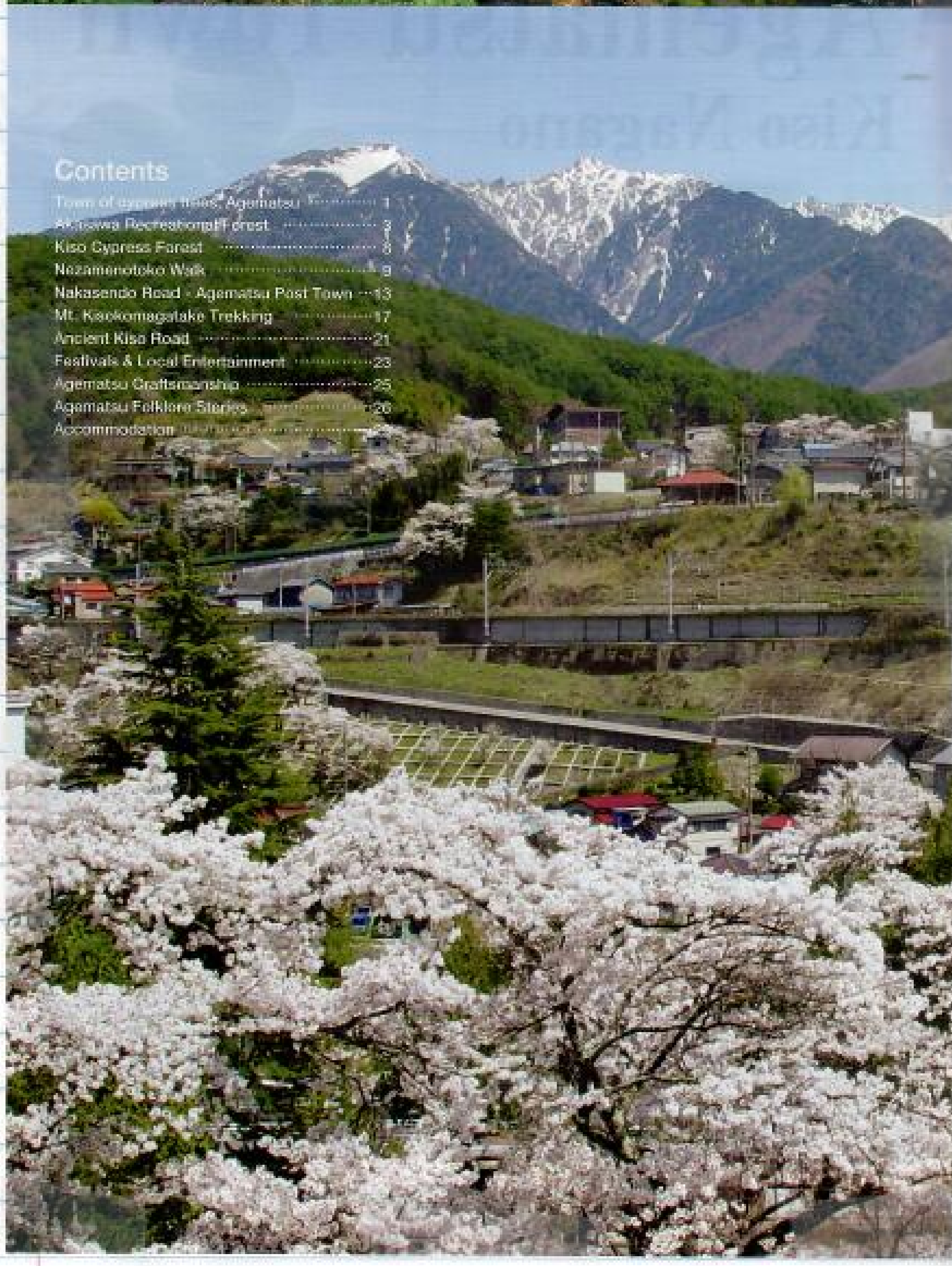

40



Tengataki Falls
Kirigataki Falls
Rasendaki Falls
Tadachinotaki Falls Campground
Midono Post Town
Mt. Anpeiji
Mt. Surikogi
Momosuke Bridge
Gogujinja Shrine
Tadachi
Nagiso
Nagiso Town
Tsumago Post Town Feudal Lord's Inn
Nagisosanroku Campground
Sakashita
Roadside station "Shizumo"
Tsumago Post Town
Kotokuji Temple
Fukinomori Onsen
Takimi Onsen
Odarenotaki Falls
Odaki Medaki Falls
Yamaguchi
Old Nakasendo Road
Araragi River
Odaira Pass
Odaira Post Town
Iida Pass
Chuo Line
Shiki Memorial Plaque
Magome Pass
Magome Post Town
Seinaiji Pass
Iida City
Seinaiji
Ochiai Post Town
Achi Village
Iida Interchange
Nakatsugawa City
Hirugami Onsen
Sonohara Interchange
Half Interchange only for the Nagoya area
Achi Parking Area
Mt. Ena



Kisokoma Highlands
Kiso Fukushima
Fukushima Post Town
Komanoyu Onsen
Auto Campground Kisokodo
Kiso Dam
Roadside station "Kiso Fukushima"
Makio Dam
Ontake Golf Course & Resort Hotel
Kiyotaki Falls
Shintaki Falls
Mt. Ontake Museum
Ontake Onsen
Ontakejinja Shrine Satomiya
Lake Ontake
Roadside station "Mitake"
Basho Memorial Plaque
Kakehashi Onsen
Agematsu Post Town
Tokyo University Kiso Observatory
Kiso no Kakehashi Viaduct
Nagoya University solar wind observatory
Otaki River
Agematsu
Ogawa Wakamiyajinja Shrine
Mt. KisoKomagatake
Komagatakejinja Shrine Satomiya
Kisoji Art Museum
Nezamenotoko Gorge
Mt. Kazakoshi
Gomaishura
Himemiya
Hajzawa Kosen
Nezamenotoko Sculpture Park
Mt. Nishimata
Agematsu Town
Tono Amidado Temple
Forest Museum
Forest Railway Museum
Forest Railway
Mt. Osuzu
Kuramoto
Akasawa Recreational Forest Therapy Center
Shikanoyu Onsen
Mt. Utsugidake
History & Folklore Museum
Suhara Post Town
Joshoji Temple
Suhara
Atera River
Atera Gorge
Okuwa Village
Okuwa
Roadside station "Okuwa"
Mt. Kosumo
Nojiri
Kakizore Gorge
Atera Onsen
Nozokido Forest Park
Nozokido Forest Park Campground
Kakizore River
Koiji Pass
Nojiri Post Town
Yogawa Pass
Kakizore Onsen
awakami



Contents

Deep history and legend can be felt in the four seasons of the landscape.

Legend of Nezame

Nezamenotoko snow scenery [C-4]

Harsh winter's blanket of snow is also one of Nezamenotoko's charms. The surrounding trees wear snow like a bride's veil, and the azure winter sky is reflected in the waters of the Kiso river as it threads through the large rocks. The beauty is reminiscent of an ink painting.

※Please be careful as Nezamenotoko can be dangerously slippery with snow and ice during winter.

Rinsenji Temple [C-4]

An ancient temple overlooking Nezamenotoko
Dedicated to Benzaiten (goddess of music and water), one of Kiso's seven lucky deities, it is also one of the sacred sites connecting the seven old temples along the old road. The temple grounds contain rocks carved with the works of the famous haiku poets, Basho Matsuo, Shiki Masaoka, and Santoka Taneda and a museum dedicated to the legend of Taro Urashima.

Rinsenji Treasure Museum [C-4]

In addition to the fishing rod that is said to be used by Taro Urashima, there are displays of old furniture and everyday items.

Monument to Basho Matsuo & Shiki Masaoka [C-4]

There are stone slabs carved with the works of poets such as Basho Matsuo and Shiki Masaoka in the temple grounds.

Kisoji Art Museum [D-4]

Exhibits include ancient ceramics, soba-dipping cups, and a collection of modern Japanese sculptures and paintings, in addition to the "69 Stations along the Kiso Road" a series of famous Ukiyo-e wood block prints from the Edo Period (displayed only at specific times). (Please contact for the exhibit details (0264-52-2554)

Nezamenotoko Sculpture Park [D-4]

A sculpture park adjacent to Nezamenotoko.
Sculptures on a theme of "time and space" in reference to the legend of Taro Urashima, including a giant sundial constructed to illustrate fluctuations in the earth's rotation upon its axis.

Strolling along the Ancient Kiso Road

The "Ancient Kiso Road" is a medieval path passing through Kiso Valley, which had been in use for a few centuries before the Nakasendo Road was developed in the Edo period.
Off the busy road by Kiso River, this path used to guide travelers between the communities at the feet of the mountains. It was an agreeable path with nice mountain views and seasonal charms.
Now, this path is an enjoyable trail where you can view Mt. Ontake and Mt. Norikura.

①Tono Amidado Temple [D-5]
Located in the center of the Tono community in Agematsu, this temple is said to be the oldest building in Kiso Valley.
There are impressive fine works on the ceiling: of over 100 flowers and birds painted by a painter of the time. Worth stopping by on the trail.

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Six stone guardian deities at Shinden Cemetery

These are the oldest statues in Agematsu, carved in 1678.
The sculptor's name is carved on the back.

Hachimangu Shrine

This is the oldest shrine in Agematsu, built in the 18th century.
Young men perform Shishi kyogen plays from the 19th century here early every September.

Legend of Kakuredaki Falls

Once upon a time, a princess showed up in front of a villager of Ogihara asking for help with escaping from pursuers, but being scared of trouble he denied her.
Then, the princess showed him a gold coin, but the villager took it without helping her.
The princess ran away through the mountain and hid herself by a waterfall, but was found by her pursuers. She finally threw herself from the waterfall.
Thereafter, this waterfall is called "Kakuredaki (hiding waterfall)", and a tiny shrine to the princess sits there.

Gojin'ya of Agematsu

Gojin'ya was an office for timber management, fortified with timber-reinforced mounds and armed with canons. This office was built for the national authorities to suppress the local officers and residents of Kiso Valley. It is said that there used to be a pine tree on the mound at the entrance.

The Four Gates of Ontake

To climb a mountain for worship and training in Shugendo, there are some rules to keep about time, order, method, and field. The four gates are also related to Shugendo.
The four gates refer to the four spiritual steps: initiation (east), practice (south), enlightenment (west), and Nirvana (north).
On Mt. Ontake, these four gates (spots) are placed as follows: Torii Pass (north), Godo in Kiso Fukushima (east), Nagamine Pass (west), and Mt. Haiden near Mt. Miura (south).
Each spot is a location where you view Mt. Ontake for the first time as you enter the Kiso Valley, which was important for the disciplinants.
In Agematsu, there was a path for Mt. Ontake worship that was older than Nakasendo Road.

Hotel Nezame Sanshi [D-4]

TEL.0264-52-2050
Capacity: 40 people
Number of rooms: 10
Open:
Throughout the year

Sakaju Ryokan [B-4]

TEL.0264-52-2036
Capacity: 10 people
Number of rooms: 3
Open:
Jan. 2nd thru Dec. 30th

Nezame Hotel [D-5]

TEL.0264-52-2245
Capacity: 85 people
Number of rooms: 20
Open:
Throughout the year

Tamasa Ryokan [B-5]

TEL.0264-52-2053
Capacity: 50 people
Number of rooms: 12
Open:
Jan. 4th thru Dec. 30th

Family-run lodge Warabiso [D-5]

TEL.0264-52-3848
Capacity: 30 people
Number of rooms: 15
Open:
Jan. 11th thru Dec. 2nd

Ryokan Haizawa Kosen [C-3]

TEL.0264-52-3287
Capacity: 10 people
Number of rooms: 4
Open:
Closed in winter, around January thru March

Kakehashi Onsen Ryokan [A-4]

TEL.0264-52-2276
Capacity: 35 people
Number of rooms: 9
Open:
Throughout the year

Keishin Campsite [C-6]

TEL.0264-52-2547
Capacity: 30 people
Tent: 50
Open: Throughout the year
(Reservation required)


三階媽祖殿
5
黑顏媽祖様
ピンク顔媽祖様
金顔媽祖様
6
五營將軍
我們都是有氣質，涵養的人，說話請放低音量，輕聲細語，保持道場安靜。
公告
請遵守本廟規則，本廟嚴禁起乩、靈動與做法。
東京媽祖廟
東京媽祖廟
進入媽祖淨土，請保持：
輕聲細語 | 笑容滿面 |
慈悲包容 | 和氣慈祥 |
有話好好說慢慢說，請勿大聲喧嘩。
媽祖様の浄土に入る際、小さい声で話し、笑顔を忘れず、慈悲と寛容の心、和やかな雰囲気で参拝しましょう。
他の人と優しくゆっくりと会話し、大声での会話はお控えください。

From: Daphne Hoh <daphnehohzhiwei@gmail.com>
Sent: Sunday, January 25, 2026 11:51 PM
To: honu world <itsahonuworldinhawaii@hotmail.com>
Subject: the third floor of Tokyo Mazu Temple

粉面媽祖（Pink-faced Mazu）"Pink-faced Mazu" represents Mazu in her benevolent, compassionate aspect. In Taiwanese folk belief, this form is associated with mercy, protection, and blessings for peace and safety, especially for families and sailors.

黑面媽祖（Black-faced Mazu）"Black-faced Mazu" symbolises a more stern and authoritative aspect of Mazu. This form is often linked to exorcism, protection against evil, and the suppression of disorder. Historically, black-faced images are associated with periods of crisis or strong divine intervention.

金面媽祖（Golden-faced Mazu）"Golden-faced Mazu" represents dignity, status, and divine authority. This form is commonly associated with imperial recognition and is often enshrined in temples with historical ties to official or state patronage.

千里眼（Qianliyan, "Thousand-Mile Eye"）A guardian deity who can see across vast distances. He serves Mazu by observing dangers far away and reporting them, symbolising vigilance and foresight.

順風耳（Shunfeng'er, "With-the-Wind Ear"）A companion guardian deity who can hear sounds carried by the wind from great distances. He represents attentiveness and the ability to detect threats or calls for help.

五營將軍 (Five Camps Generals) refers to a military-style protective system commonly found in Taiwanese folk religion and Daoist-influenced temple practice. They are not a single deity, but a coordinated group of spirit-generals who serve higher gods such as Mazu. "五營" literally means five military camps, corresponding to the five directions:
East Camp (東營), West Camp (西營), South Camp (南營), North Camp (北營), Central Camp (中營).
Each camp is commanded by a general (將軍) and staffed by spirit soldiers.


レストラン

Zoom at 2 PDT P.I. Zoom MONDAY 3/9/2026 11AM

From Larry B. Crowder <lbcrowd@stanford.edu>
Date Mon 3/9/2026 6:51 PM
To Dana K Briscoe <dbriscoe@stanford.edu>; Jeffrey Polovina <polovinajeff@gmail.com>; Jeffrey Seminoff <jeffrey.seminoff@noaa.gov>; honu world <itsahonuworldinhawaii@hotmail.com>

HST
4 years program

Hi there,

Budget runs through June 2027

extend 2028 for PNPA through 2028
NO COST

larry crowder is inviting you to a scheduled Zoom meeting.

* IRAN war

Topic: My Meeting
Time: Mar 9, 2026 02:00 PM Pacific Time (US and Canada)

¡ TELL Kurita!
$ STATUS

Join from PC, Mac, Linux, iOS or Android: https://stanford.zoom.us/j/97580909981?pwd=RM9ReSSxyEcihqFW9PRXnnztE1wSGE.1
Password: 834466

up life Larry

2027 - 2028 fully not $ for DANA

!! Zug Chaloupka paper

Or iPhone one-tap (US Toll): +18333021536,,97580909981# or +16507249799,,97580909981#

wrap up June 2028

Or Telephone:
Dial: +1 650 724 9799 (US, Canada, Caribbean Toll) or +1 833 302 1536 (US, Canada, Caribbean Toll Free)

Longer programming - yes

Meeting ID: 975 8090 9981
Password: 834466
International numbers available: https://stanford.zoom.us/u/abY4haT84v

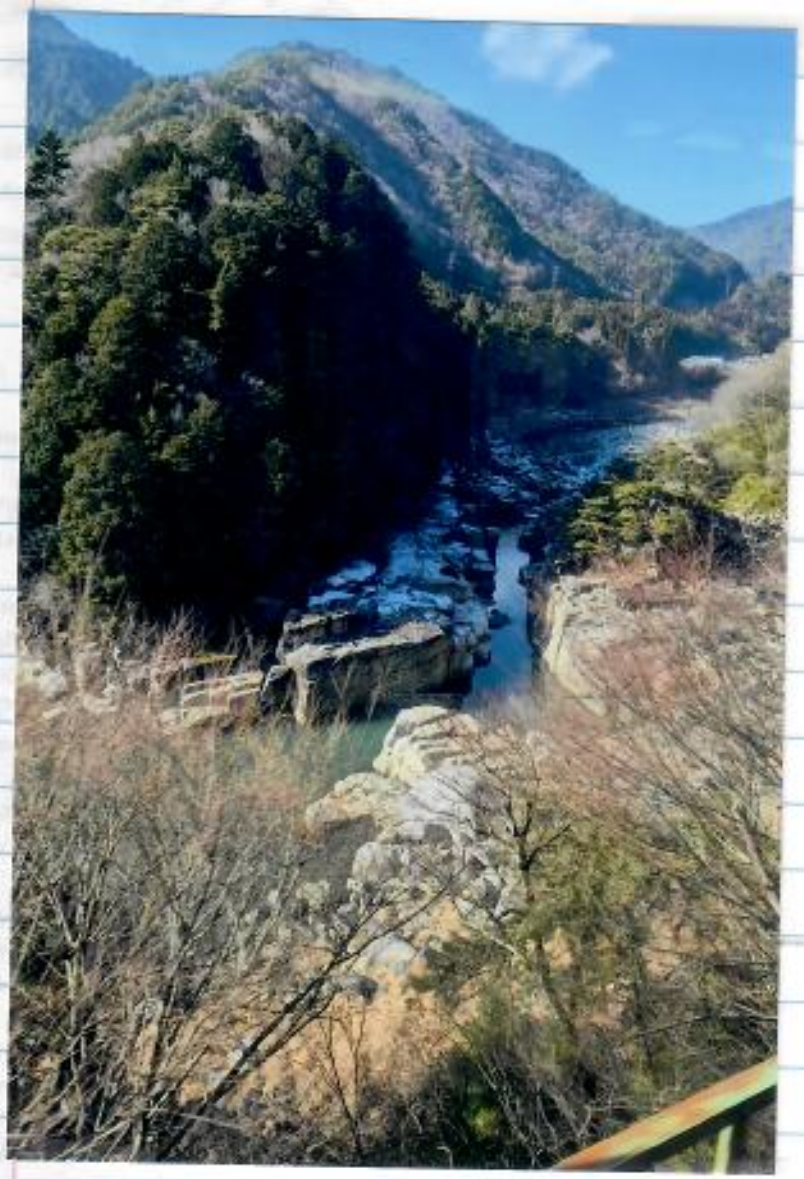
Chaloupka - Project

Meeting ID: 975 8090 9981
Password: 834466
SIP: 97580909981@zoomcrc.com
Password: 834466

Not funding A 2027 cohort

Tag P486 6 years to 37 cm


麻雀
日の出
HISAR




伝説の四国水景


Capsule Figure
Collection

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Gmail George Balazs <honumazu@gmail

2026- Different Mazu- The third floor of Tokyo Mazu Temple

1 message

George Balazs <itsahonuworldinhawaii@hotmail.com>
To: George Balazs <honumazu@gmail.com> Tue, Jan 27, 2026 at 1:

From: Daphne Hoh <daphnehohzhiwei@gmail.com>
Sent: Sunday, January 25, 2026 11:51 PM
To: honu world <itsahonuworldinhawaii@hotmail.com>
Subject: the third floor of Tokyo Mazu Temple

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|| 何芷蒴 Daphne Z Hoh, PhD
|| Co-founder of TurtleSpot Taiwan
|| Biodiversity Information Standards (TDWG) Asia Regional Representative
|| Postdoc @ East China Normal University, Shanghai
|| Timezone UTC+8 @ Kuala Lumpur, Shanghai

Abstract BJORNDAL ET AL. 2003

Compensatory growth (CG, accelerated growth that may occur when an organism that has grown at a reduced rate as a result of suboptimal environmental conditions is exposed to better conditions) is considered an adaptation to variable environments. Although documented thoroughly under captive conditions, CG has rarely been studied in wild populations. In their first years of life, oceanic-stage loggerhead sea turtles (Caretta caretta) have relatively little control over their geographic position or movements and thus have an extremely stochastic lifestyle with great variation in food availability and temperature. This environmental variation results in variable growth rates. We evaluate somatic growth functions of oceanic-stage loggerheads from the eastern Atlantic based on skeletochronology that allowed us to assign age and cohort to each individual. We demonstrate CG in these turtles based on three different analytical approaches: changes in coefficients of variation in size-at-age, generalized additive model regression analyses of somatic growth, and linear regression of age-specific growth rates. As a result of CG, variation in size-at-age in these juvenile loggerheads is substantially reduced. Thus, size is a better predictor of age than expected based on variation in growth rates. CG decreases with age, apparently as loggerheads gain greater control over their movements. In addition, we have evaluated for the first time in wild sea turtles the time-dependent nature of somatic growth rates, but there was no significant cohort effect. Our results address critical gaps in knowledge of the demography of this endangered species.

Corresponding Editor: R. J. Etter.

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Biology and Conservation of Loggerhead Turtles (*Caretta caretta*) in Baja California, Mexico

WALLACE J. NICHOLS[1], ANTONIO RESENDIZ[2] AND CESAR MAYORAL-RUSSEAU[3]

[1]*Wildlife & Fisheries Sciences, School of Renewable Natural Resources, Univ. of Arizona, Tucson, Arizona 85721, USA*
[2]*Instituto Nacional de Pesca, El Sauzal de Rodriguez, Ensenada, Baja California, Mexico*
[3]*Cooperativa Pesquera Punta Abreojos, Baja California Sur, Mexico*

19th Annual Sea Turtle Symposium 1999

been present on the beach for up to several months. None of the stranded turtles appeared to have suffered any type of trauma. Both at sea and stranding surveys always involved the participation of members of the local fishing communities. In the case of Punta Abreojos surveys, the entire fishing cooperative was enlisted to aid in our survey efforts. The range in size for all turtles encountered along the Pacific coast of Baja California during this study was 35-80 cm (SCL) with a mean of 61 cm (N=58). Eleven turtles were captured in the Gulf of California with a mean SCL of 49 cm (28-93 cm).

Feeding. Four stomach content samples of stranded loggerhead turtles were obtained from Bahia Santa Maria, BCS, Mexico in the summer of 1998. All four samples contained only *Pleuroncodes planipes*, the pelagic red crab. Interviews with fishermen who regularly capture and consume loggerhead turtles in the region support these observations. During this same period 15 Humboldt squid (*Dosidicus gigas*) were also examined and were found to be feeding entirely on *P. planipes*.

In the waters near the Pacific coast of Baja California the most common sea turtles appear to be juvenile pelagic loggerheads moving in a generally southwestward direction with the currents. In the spring, with the winds from the north, the California current runs along the Baja California coast, weakening through the summer and into the fall and allowing for the influence of the Davidson current from the south along the coast (Wyrtki 1965). This pattern of the surface currents may have been disrupted and/or enhanced during the recent El Niño event, resulting in anomalous warm surface waters and lower productivity—by summer 1998 conditions had begun to return to "normal".

The loggerhead turtles in this region appear to be feeding primarily on *Pleuroncodes planipes*, the pelagic red crab or "langostilla", and turtles are likely to be found closer to shore during the spring and summer when aggregations of their prey are most abundant. The standing stock of the benthic phase of this species is estimated to be from 300 to 500 thousand metric tons with densities to 40 crabs/m^2 (Aurioles-Gamboa and Perez-Flores 1997). The crabs reproduce in spring and the pelagic phase may last for up to two years. After the third year crabs become entirely benthic and retreat to cooler, deep water in the late summer when the influence of the Davidson current prevails along the coast. Stomach content analyses support the observation that these turtles feed on pelagic phase crabs during summer months.

Results

Movement. All three loggerheads tracked by this project left the region in a southwestern direction somewhat consistent with the flow of the California Current. Detailed data will be presented elsewhere.

• Loggerhead PAO204 (PTT 01085), 64 cm (SCL), was tracked for a total of 268 days from 3 July 1998 to 18 September 1998.

• Loggerhead PAO205 (PTT 05520), 73.4 cm (SCL), was tracked for a total of 78 days from 11 September 1997 to 5 June 1998.

•Loggerhead BLA099 (PTT 07667), an 83 cm adult female, was tracked for a total of 368 days from 12 August 1996 to 14 August 1997. Bowen *et al*. (1995) had previously determined this turtle to be of Japanese origin.

Abundance and Distribution. Surveys at sea resulted in sightings of loggerhead turtles during all seasons. However, peak numbers occurred during the summer of 1997 (**Table 1**). During the 1998 summer and fall surveys *P. planipes* were not observed and fishermen indicated that the waters were especially warm and that the fishing was poor. Stranding data indicate a peak in late spring and summer followed by a decline in numbers of stranded turtles in the fall and winter. Stranded turtles encountered in winter months showed advanced decomposition and had likely

Conclusions

1) Loggerhead turtles are the most abundant sea turtle species in pelagic waters near Baja California during spring and summer months.

2) The Baja California loggerhead population is comprised of predominantly juvenile turtles feeding principally on *Pleuroncodes planipes*.

3) Satellite telemetry provides a useful method for studying the movement and behavior of juvenile Pacific loggerheads, especially due to their tendency to spend long periods of time basking at the surface, and suggests a southwestern trend in loggerhead movement in the region.

4) Seasonal incidental catch of loggerhead turtles related to gillnet, halibut and shark fisheries is likely a significant source of mortality in the region.

Further investigation of the movement, abundance and mortality rates of these animals is needed.

Acknowledgements

Vol. 13: 25–31, 2010
doi: 10.3354/esr00311

ENDANGERED SPECIES RESEARCH
Endang Species Res

Published online December 3

OPEN ACCESS

Combining stable isotopes and skeletal growth marks to detect habitat shifts in juvenile loggerhead sea turtles *Caretta caretta*

Melissa L. Snover[1,*], Aleta A. Hohn[2], Larry B. Crowder[1], Stephen A. Macko[3]

[1]Duke University Marine Lab, 135 Duke Marine Lab Road, Beaufort, North Carolina 28516, USA
[2]NOAA, NMFS, SEFSC, 101 Pivers Island Road, Beaufort, North Carolina 28516, USA
[3]Department of Environmental Sciences, University of Virginia, 291 McCormick Road, Charlottesville, Virginia 22903, USA

ABSTRACT: Understanding the phase and timing of ontogenetic habitat shifts underlies the study of a species' life history and population dynamics. This information is especially critical to the conservation and management of threatened and endangered species, such as the loggerhead sea turtle *Caretta caretta*. The early life of loggerheads consists of a terrestrial egg and hatchling stage, a post-hatchling and juvenile oceanic, pelagic feeding stage, and a juvenile neritic, primarily benthic feeding stage. In the present study, novel approaches were applied to explore the timing of the loggerhead ontogenetic shift from pelagic to benthic habitats. The most recent years of somatic growth are recorded as annual marks in humerus cross sections. A consistent growth mark pattern in benthic juvenile loggerheads was identified, with narrow growth marks in the interior of the bone transitioning to wider growth marks at the exterior, indicative of a sharp increase in growth rates at the transitional growth mark. This increase in annual growth is hypothesized to correlate with the ontogenetic shift from pelagic to benthic habitats. Stable isotopes of carbon and nitrogen just interior and exterior to the transitional growth mark, as well as stable isotopes from pelagic and benthic flora, fauna and loggerhead stomach contents, were analyzed to determine whether this transition related to a diet shift. The results clearly indicate that a dietary shift from oceanic/pelagic to neritic/benthic feeding corresponds to a transitional growth mark. The combination of stable isotope analysis with skeletochronology can elucidate the ecology of cryptic life history stages during loggerhead ontogeny.

KEY WORDS: Sea turtle · *Caretta caretta* · Growth · Skeletochronology · Stable isotopes

going back & forth would show?

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Re: Can we all meet 11 am PDT Monday?

message

eorge Balazs <honumazu@gmail.com> Sat, Oct 18, 2025 at 7:
o: "Larry B. Crowder" <lbcrowd@stanford.edu>
c: Dana K Briscoe <dbriscoe@stanford.edu>, Jeffrey Seminoff <jeffrey.seminoff@gmail.com>, Jeffrey Polovina Polovinajeff@gmail.com>

Some gb thoughts-
-Is this an pitch letter or a proposal?
-No matter which, maybe some of each- both Showmanship and Science are needed with a big dose of the former to convince MOL (& PNPA) it's worth their money and time.
-Is this pitch proposal for more of the same steering steady with Stretch 1.0? Or moving to a 1.5 or even 2.0 with new meaning but still Stretch name?
-Where does Leader Lali want the project to go?
-We have not asked Saito-san & Kurita-san what THEY would like to see unfold. Maybe they are happy to just 'follow us', but even if that's the case it would behoove us to ask as international colleague courtesy.
-Stretch, thus far, is focused.. Far From Japan. Something/anything in the project, as a component, that's Closer to Japar might be more appealing to MOL.
-What's envisioned as a 3rd publication of Stretch at this time?
-Lali, what's the ballpark bucks you envision seeking? Surely a bottom line crucial question MOL will want to know. 50K? 100K? $200K? 500K? Or?
Lots to ponder on short notice as we "Swim Fast by the Seat of our Pants!" gb

On Sat, Oct 18, 2025, 4:37 AM Larry B. Crowder <lbcrowd@stanford.edu> wrote:

> Hi team!
> I'll send a zoom for 11 am PDT. Meantime send me your ideas about on going STRETCH research, critical new additions that need funding, desirable expansions. L
> Sent from my iPhone
>
> On Oct 17, 2025, at 11:08 PM, Dana K Briscoe <dbriscoe@stanford.edu> wrote:
>
> Hi Larry,
>
> I've been traveling home today and just catching up on emails. I have a dentist appt at 7:30am Tues NZ, but please go ahead as I know this is time sensitive work. I can plan to catch up after.
>
> Thanks,
> Dana

Gmail

JF
2 year olds = Point of diminishing returns

George Balazs <honumazu@gmail.com>

10/20/2025 P55 887604 8AM 9AM

Re: Ideas for Stretch 2.0

1 message

Sun, Oct 19, 2025 at 10:18 AM

Jeffrey Seminoff <jeffrey.seminoff@gmail.com>
To: "Larry B. Crowder" <lbcrowd@stanford.edu>
Cc: Jeffrey Polovina <Polovinajeff@gmail.com>, honumazu <honumazu@gmail.com>, Dana K Briscoe <dbriscoe@stanford.edu>

Don't Hopscotch Kurita

10 kurita

Should letter be sent?

Hi Larry,

Building off Jeff's ideas in orange below. Note I grayed out 4 as per earlier email discussion.

Jeff

Is Caretta "Ace"

Spending $400K a year

"Foolish American Misstep"

On Oct 18, 2025, at 10:17 AM, Jeffrey Polovina <Polovinajeff@gmail.com> wrote:

1. Continue documenting range expansion and contraction. At the northern end we see turtles moving into the northern CC. By 2030 will we see loggerheads routinely in Canadian waters and some in the Gulf of Alaska? At the southern end will waters off Baja by 2030 become too warm (an upper limit thermal corridor) so loggerheads routinely migrate across into waters off California rather than Baja? However, we currently see some loggerheads in 25C waters off Baja so understanding their upper temperature tolerance is a research issue to pursue.

1.b. Combine STRETCH and historic (Peckham et al.) telemetry data to describe oceanographic drivers of presence/absense in Gulf of Ulloa and nearby off-shelf waters. Results could have major implications for the loggerhead bycatch issue and US-Mexico fisheries management.

2. Work with Philippe to develop a spatial loggerhead movement model with the latest Stretch data to present a basin-wide synthesis of loggerhead temporal and spatial dynamics.

2.b. (maybe just a side project) Work with Philippe to reexamine his former model outputs with respect to loggerhead movements even further east that Gulf of Ulloa, into Gulf of California and Sinaloa waters

3. Work with Wildlife Computers to incorporate new tag technology in our deployed tags. A radar sensor to document vessels encountered in loggerhead migrations, compass direction to compare loggerhead orientation with movement direction especially when in currents.

4. Sex resolved tracks. This idea was suggested in our recent meeting but George thinks our Japanese colleagues may have reservations. Certainly we want to respect those concerns but it would be good to understand what those concerns are and if they can be addressed before abandoning this idea.

Jeff

On Oct 18, 2025, at 10:21 AM, Larry B. Crowder <lbcrowd@stanford.edu> wrote:

Thanks Jeff! L
Sent from my iPhone

highly emphasize the *Port of Nagoya Public Aquarium* early in the write-up, and Director Kurita crucial role

Draft Mitsui O.S.K. pitch 10/7/25 DRAFT

Japanese Loggerheads Expertly Navigate a Sea of Change: A proposal for STRETCH 2.0

Larry B. Crowder (PI), Edward Ricketts Professor of Marine Ecology and Conservation, Hopkins Marine Station, Stanford University, 120 Oceanview Blvd., Pacific Grove, California 932950
Masanori Kurita, Director, Port of Nagoya Public Aquarium, 1-3 Minato-Machi, Minato-ku, Nagoya Japan 455-0033

Mitsui O.S.K. Lines (MOL) is a global leader in shipping with a strong commitment to environment and sustainability. Their innovations focus on improving the efficiency and safety of their shipping operations but also to reducing their climate impacts and protecting biological diversity around the world. Many of their projects are linked directly to shipping operations and to reducing the environmental impacts of their critically necessary global business. But other projects, such as their project to automate the assessment of ocean plastics along their shipping routes, provide global insights that would be otherwise impossible to acquire.

Since 2023, MOL has generously supported an international research project, the Sea Turtle Research Experiment on the Thermal Corridor Hypothesis (STRETCH), by transporting and releasing satellite-tagged Japanese loggerheads (*Caretta caretta*) into the eastern North Pacific. These turtles hatch on beaches in Japan and cross the North Pacific Ocean to the Baja peninsula in Mexico. Until 30 years ago scientists did not know that Mexican loggerheads originated in Japan. Japanese loggerheads are "ancient mariners" that evolved over 40 million years ago. They have endured climate variation and other threats to maintain an evolutionarily distinct, but endangered, population. North Pacific loggerheads, like MOL, cross whole oceans to complete their life cycle and to maintain their success. The STRETCH team includes researchers from Japan, Mexico, California, Hawaii, and New Zealand. Turtles are carefully collected from Kochi beach, expertly reared by our close collaborators at the Port of Nagoya Public Aquarium, satellite tagged by researchers with decades of experience, and transported to their release point by MOL. In July 2025 we successfully released our third of a planned four cohorts of loggerheads. At our recent mid-project meeting at Hawaii Pacific University on October 10, 2025 (attended by Ms. Kanako Ota of MOL), we reported on exciting new scientific results and emerging research plans, with implications for both scientific discovery and conservation. We also developed a clear vision for how to build upon our initial research objectives.

Our current project is outlined on our website (www.loggerheadstretch.org), and our research, currently funded by Gordon and Betty Moore Foundation and National Geographic, is revealing how these animal oceanographers sense and respond to the rapidly changing North Pacific Ocean. Japanese loggerheads are teaching our scientific

team (and the world) about our changing ocean climate from the perspective of an animal with an evolutionary history ten times longer than people. We have known for decades that these loggerheads can survive and grow in the North Pacific Transition Zone before returning to Japan to nest. But our recent discoveries show they can also navigate changing seas via a dynamic "thermal corridor" to grow and mature along the west coast of North America before returning to Japan to complete their life history. They are navigating seas further north than ever before, transitioning much more frequently toward the west coast of North America, and showing up as juvenile turtles as far north as Northern California and Oregon. These "sentinel" turtles are providing novel scientific discoveries, but they are also illuminating how these ancient mariners navigate our changing ocean, which is critical to conserving and restoring this endangered species, native to Japan.

We thankfully acknowledge MOL's ongoing support of STRETCH. As the top shipping company in the North Pacific, your in-kind support to take our experimental turtles to sea is ~~much~~ greatly appreciated. Each member of the STRETCH team brings decades of experience to the project, and we depend upon support from key institutions in Japan (Kochi University, PNPA, Tohoku University), Mexico (UNAM), and the US (Stanford University and NOAA) which also provide in-kind support for the project through faculty, scientist, and graduate student support for the project. We welcome the opportunity to brief you on our project outcomes to date and our hopes for continued collaboration when the project PI (Larry Crowder, Stanford University) and Port of Nagoya Public Aquarium Director (Masanori Kurita) visit your office in Tokyo on November 7, 2025. Once again, we thank you for your support and look forward to continuing our collaboration. We like to think of Japanese loggerheads as expert navigators in our changing seas and in many ways emblematic of the environmental mission of Mitsui O.S.K. Lines.

184

1/2026 Logbook DATASET

Honglin Zhang

Research Summary

My research investigates the biophysical interactions between mesoscale oceanic dynamic processes, particularly mesoscale eddies, and marine top predators in the context of climate change. Adopting an interdisciplinary approach that bridges marine ecology, fisheries science, and physical oceanography, I am employing satellite remote sensing, ocean circulation modeling, and big data analytics to unravel and forecast predator response mechanisms in a rapidly changing ocean.

Basic Information

• TEL: (+86) 15375787448 • E-mail: d250200078@st.shou.edu.cn, lebron765488533@163.com

• Address: No. 999 Huchenghuan Road, Lingang New City, Shanghai, China

Education and Awards

PhD Candidate (Fisheries) **Shanghai Ocean University** **College of Marine Living Resource Sciences and Management** **2025–Now**

- Supervisors: Yunkai Li & Qinwang Xing; • Research Area: Marine Ecology & Fisheries Oceanography

Master (Fisheries) **Shanghai Ocean University** **College of Marine Living Resource Sciences and Management** **2022–2025**

- Supervisors: Jian Zhang; • Research Area: Fisheries Resources
- Thesis: Impact of environmental factors and their interrelationships on CPUE in shrimp trawl fisheries along the Western Coast of Madagascar
- Awards: National Scholarship for Graduate Student; Second-Class Scholarship; Outstanding Graduates of Shanghai Ocean university

Bachelor (Marine Fishery) **Zhejiang Ocean University** **Fisheries College** **2018–2022**

- Supervisors: Lili Liu; • Research Area: Fishing science
- Thesis: Research on eco-friendly fishing gear design and development strategies in Zhoushan city
- Awards: Third-Class Scholarship; Individual Scholarship

Project Experience

2022 – 2024:

Participated in the management of specialized catch limit programs during the summer fishing moratorium in Shanghai.

2023:

Contributed to the national standard revision project for *Quantities, Units, and Symbols of Fishing Gear and Fishing Gear Materials*.

2025:

Engaged in **the National Natural Science Foundation of China General Program**: *Drivers of Initial Migration in Pregnant Blue Sharks (Prionace glauca) in the Northwest Pacific: Insights from Satellite Tracking and Non-Lethal Sampling*

Honglin Zhang

1/2026 Legacy Dataset (184)

Research Summary

My research investigates the biophysical interactions between mesoscale oceanic dynamic processes, particularly mesoscale eddies, and marine top predators in the context of climate

Skills and Certificates

- Programming Languages: R(4 years), Python(3 years), Matlab(2 years)
- Professional Skills: Skillful Big Data Analysis using CPU parallel;
  Commonly used statistical analysis in Oceanography and Fishery
- Data Visualization: Skillful Photoshop and Python
- English Proficiency: Good writing skills; Primary listening and speaking ability
- Other: Excellent learning capacity and quickly grasping analysis method in published papers

Publications

Papers

1. **Zhang, H.**, Zhang, J., Song, H., et al. Effects of freshwater replenishment on the *Fenneropenaeus indicus* CPUE along the west coast of Madagascar based on structural equation modeling. Regional Studies in Marine Science, 2025, 81: 103937.
2. Zhang, J., **Zhang, H.**, He, P., et al. Selectivity of crab pots with escape vents and the optimal vent height for reducing the catch of sublegal swimming crab in the East China Sea pot fishery. Fisheries Research, 2024, 274: 107002.
3. **Zhang, H.**, Ma, Y., Song, H., et al. Effects of environmental factors on CPUE of pair trawl skipjack tuna in Mauritania based on structural equation modelling. Journal of Fishery Sciences of China, 2024, 31(4): 465-475

Journal of Experimental Marine Biology and Ecology 384 (2010) 61–67

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tellite transmitter attachment techniques for small juvenile sea turtles

n E. Seney [a,b,*], Benjamin M. Higgins [c], André M. Landry, Jr. [a,b]

Turtle and Fisheries Ecology Research Laboratory, Texas A&M University at Galveston, 5007 Avenue U, Galveston, TX 77551, United States
artment of Wildlife & Fisheries Sciences, Texas A&M University, 2258 TAMU, College Station, TX 77843, United States
NA Fisheries Sea Turtle Facility, Southeast Fisheries Science Center, 4700 Avenue U, Galveston, TX 77551, United States

TICLE INFO

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ved 7 September 2009
ved in revised form 31 December 2009
oted 5 January 2010

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ABSTRACT

Three trials comprised of 4, 16, and 8 captive-reared juvenile loggerhead sea turtles (*Caretta caretta*) were run for 164, 134, and 213 d, respectively, to evaluate platform terminal transmitter (PTT) attachment methods. Power-Fast® epoxy-only (PF-only) and Power-Fast®/Sonic-Weld® epoxy putty (PF/SW) protocols were tested in each trial, and the latter trials also included experimental, less-rigid methods incorporating 1.5 and 3.0 mm neoprene. Protocols were modified slightly for the latter trials compared to those of the first, utilizing coarser sandpaper for site preparation and discarding initial "squeezes" of epoxy.

Despite a low average growth rate (0.012 cm/d), three of four PTTs were shed from the loggerheads in Trial 1. All PTTs remained attached in Trial 2 after an average straight carapace length (SCL) increase of 3.4 cm (0.024 cm/d), suggesting that protocol modifications improved upon Trial 1 methods. One 3.0-mm neoprene attachment and a PF-only attachment were shed during Trial 3 after SCL increases of 3.7 and 5.4 cm, respectively. The other six PTTs remained attached after an average SCL increase of 9.6 cm (0.045 cm/d), but significant gaps occurred along the perimeters of the three remaining non-neoprene attachments. Two neoprene attachments became loose along the edges while their centers remained secure, suggesting that carefully-applied neoprene attachments may be beneficial for tracking smaller, faster-growing sea turtles.

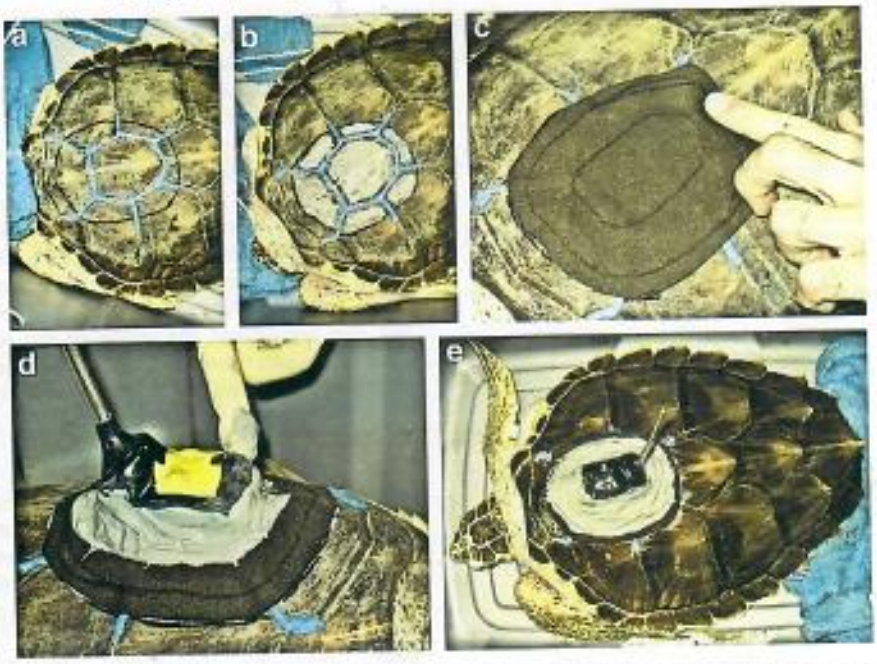

Fig. 1. Neoprene attachment technique. (a) RTV silicone and outline of neoprene attachment site, (b) Power-Fast epoxy on attachment site, (c) attachment of neoprene to carapac
d) attachment of PTT to neoprene, and (e) completed attachment on captive-reared loggerhead sea turtle.

Fig. 3. Epoxy pattern on neoprene removed (a) immediately after attachment and (b) at the end of Trial 2.

CHELONIA MYDAS AGASSIZII (East Pacific Green Seaturtle). **DIET.** The feeding habits of *Chelonia mydas agassizii* have been documented for much of its range (Felger and Moser 1987. Environ. Southwest. Fall 1987:18–21; Casas-Andreu and Gomez-Aguirre 1980. Bolm. Inst. Oceanogr., S. Paulo, 29:87; Seminoff et al. 2002. J. Herpetol. 36:447–453). Although immature and adult *C. mydas agassizii* are known to be primarily herbivorous, feeding on seagrasses and/or marine algae, this turtle occasionally consumes invertebrates (Casas-Andreu and Gomez-Aguirre, *op cit.*; Felger and Moser, *op cit.*; Seminoff et al. 2000. Herpetol. Rev. 31:103). Here we report on the consumption of pelagic red crabs (*Pleuroncodes planipes*) by a *C. m. agassizii* along the Pacific Coast of the Baja California peninsula, Mexico.

Between October 2000 and March 2002, we examined digestive tract contents of 23 turtles that were incidentally drowned in fishing nets near Bahía Magdalena, Baja California Sur, México (24°15'–25°20'N and 111°20'–112°15'W). On 12 February 2002, we recovered a stomach from an immature *C. mydas agassizii* (straight carapace length = 54.4 cm) containing more than 82% by volume of red crabs (*Pleuroncodes planipes*). *P. planipes* has been shown to be a primary food of Loggerhead Seaturtles (*Caretta caretta*) in the Pacific Ocean (Ramirez-Cruz et al. 1991. Archelon 1[2]:1–4), but to our knowledge this is the first report of red crab consumption by a *C. m. agassizii*, and the first documentation of a Green Seaturtle feeding predominantly on crustaceans. The highest densities of *P. planipes* in the eastern Pacific Ocean occur off Bahía Magdalena; the crabs migrate inshore during cold season (winter–spring) upwelling conditions (Aurioles-Gamboa 1992. Crustaceana 62:71–84). This finding is consistent with reports by Bjorndal (1997. *In* Lutz and Musick [eds.]. The Biology of Sea Turtles, pp. 199–232. CRC Press, Boca Raton, Florida) that East Pacific Green Seaturtles may have a more carnivorous diet than *Chelonia* of other regions.

We thank the CIBNOR (Centro de Investigaciones Biologicas del Noroeste, S. C.) for providing financial support for this field study.

Submitted by **MILAGROS LOPEZ MENDILAHARSU**, and **SUSAN C. GARDNER**, Centro de Investigaciones Biológicas del Noroeste, S.C., La Paz, BCS 23090, México (e-mail: milagros@cibnor.mx); **JEFFREY A. SEMINOFF**, Archie Carr Center for Sea Turtle Research, Department of Zoology, University of Florida, Gainesville, Florida 32611-8525, USA.

2003

12/26	LANAI CAT SANCTUARY WWW.LANAICATS HI	212.00
12/27	GOOGLE *VOICE g.co/helppay# CA	25.00
12/27	CAPTURE/YES VIDEO 408-907-7614 CA	45.97
12/31	SP CAPTUREYES VIDEO CAPTURE.COM CA	398.16
01/01	SP CAPTUREYES VIDEO CAPTURE.COM CA	152.06
01/03	AMAZON MKTPL*0696F6TU3 Amzn.com/bill WA	13.42
01/07	SP CAPTUREYES VIDEO CAPTURE.COM CA	51.98
01/14	HTL NIKKOKANSAI AIRP OSAKA 01/16 YEN 15,400 X 0.006322077 (EXCHG RATE)	97.36
01/14	KIX TENANTS OSAKA 01/16 YEN 290 X 0.006310344 (EXCHG RATE)	1.83
01/15	PLUSTA BENTO OSAKA 01/17 YEN 3,021 X 0.006325719 (EXCHG RATE)	19.11
01/15	YAMACHAN KANAYAMANISHITEN NAGOYA 01/17 YEN 16,071 X 0.006336257 (EXCHG RATE)	101.83
01/15	LAWSON TOKYO 01/17 YEN 1,078 X 0.006326530 (EXCHG RATE)	6.82
01/17	MIYU-JIAMUSHIYOTSUPU KI NAGOYA 01/19 YEN 840 X 0.006333333 (EXCHG RATE)	5.32
01/17	MISUTADONATSU KANAYAMATEN NAGOYA 01/19 YEN 409 X 0.006332518 (EXCHG RATE)	2.59
01/16	SEVEN-ELEVEN TOKYO 01/19 YEN 334 X 0.006347305 (EXCHG RATE)	2.12
01/17	NAGOYA PORT BUILDING AICHI 01/19 YEN 600 X 0.006333333 (EXCHG RATE)	3.80
01/16	JR EAST SIBUYAKU 01/19 YEN 1,057 X 0.006319772 (EXCHG RATE)	6.68
01/17	SUSHIHONKE KANAYAMAM NAGOYA 01/19 YEN 6,200 X 0.006337096 (EXCHG RATE)	39.29
01/18	PLUSTA AICHI 01/20 YEN 193 X 0.006321243 (EXCHG RATE)	1.22
01/18	PLUSTA GIFT NAGOYA 01/20 YEN 440 X 0.006340909 (EXCHG RATE)	2.79
01/18	SOBAKICHI NAGOYA 01/20 YEN 3,840 X 0.006335937 (EXCHG RATE)	24.33
01/19	PLUSTA AICHI 01/21 YEN 496 X 0.006330645 (EXCHG RATE)	3.14
01/19	OKAYAMA EKIBEN OKAYAMA 01/21 YEN 2,480 X 0.006334677 (EXCHG RATE)	15.71
01/19	ANA CROWNE PLAZA HOTEL NAGOYA 01/21 YEN 263,000 X 0.006336311 (EXCHG RATE)	1,666.45

Notes by gb: 12 Noon Talking Points Lunch 9/30/2022- Workshop Organizing Committee

From honu world <itsahonuworldinhawaii@hotmail.com>
Date Wed 10/5/2022 1:44 AM
To Thierry Work <thierry_work@usgs.gov>; Brenda Jensen <bjensen@hpu.edu>
Cc honu world <itsahonuworldinhawaii@hotmail.com>

-"How we did?" - Fully Successful, as judged by 1) lack of negative feedback, 2) short positive remarks received on-site, 3) number attending (including virtual) and staying throughout, and 4) Our own good feelings. Also, many that came were returnees from February 2020 workshop. Balazs and Work expressed praise and appreciation to HPU and Brenda/HPU! We felt that the virtual component was of high value, especially for far-flung nations of Oceania outside of Hawaii. Virtual should definitely be retained in future workshops.

-"Why?" There's a clear need in Hawaii/Oceania for an event like our workshops about sea turtles. People like/love/appreciate/benefit from turtles for many reasons. It's culturally & community-wise healthy for an array of folks to come together to listen, learn and even debate with one another about their divergent views and research findings. HPU has proven to be the perfect neutral setting for such respectful sharing.

-"Who Now?" A discussion topic was presented to have a core Organizing Committee (Brenda, Thierry and George) with a fourth member serving rotationally for each workshop (e.g., Karla for the 1st workshop, Summer for the 2nd, new person for the 3rd etc.) Past members would be invited to serv post-workshop on an Advisory Committe that the Organizing Committee could call upon for input/advice.
NOTE- DECISION NEEDED PLEASE. However, please see last item below for more on this same topic.

-"Where?" The advantages of having the workshop on Oahu, for the foreseeable, are overwhelmingly positive. The advantages of having the workshop at HPU are equally positive and fully clearly shown b the HPU hosting success in 2020 and 2022.

-"When?" We felt that September/October would work best- first and foremost because of HPU and student schedules, **and** the fact that having the 3rd workshop 15-16 months after the 2nd workshop far better than holding the 3rd less than 12 months after the 2nd workshop.
NOTE- DECISION NEEDED PLEASE to pick at least a tentative week in Sept/Oct to aim for.

-"About What?" We agree that one overarching theme per workshop was best, in contrast to more one theme crowded into a single day. And, we talked about how the rotational member could be c on the basis of bringing expertise of that theme to the Organizing Committee. Both as a person herself/himself, and based on the agency/organization the person comes from. These could be N US government agencies (NPS, FWS, etc), State of Hawaii agencies i.e., DLNR, private and public universities, business entities, and others (did I miss any?). For our 3rd event, we talked seriously a

the theme being Turtle Strandings and the possible rotational member to invite being Jon Gelman of HMAR.
NOTE- DECISION NEEDED PLEASE.

-"Brief mention about the West Coast Sea Turtle Symposium 19-20 October in Long Beach"- GB will attend this first-of-it's kind meeting in California. Jeff Seminoff is one of the organizers. GB will 'talk up' our workshops and planning process for the 3rd 'sometime in latter 2023'. Dreaming toward the future, there are good possibilities for cross coordination and synergism between the Hawaii/Oceania event and West Coast event.

Brenda and Thierry, What have I missed? Please add, substract, delete to the above, as your memories recall. Feedback and decisions by Friday 10/14?
Respectfully, gb

Abstract

Compensatory growth (CG, accelerated growth that may occur when an organism that has grown at a reduced rate as a result of suboptimal environmental conditions is exposed to better conditions) is considered an adaptation to variable environments. Although documented thoroughly under captive conditions, CG has rarely been studied in wild populations. In their first years of life, oceanic-stage loggerhead sea turtles (Caretta caretta) have relatively little control over their geographic position or movements and thus have an extremely stochastic lifestyle with great variation in food availability and temperature. This environmental variation results in variable growth rates. We evaluate somatic growth functions of oceanic-stage loggerheads from the eastern Atlantic based on skeletochronology that allowed us to assign age and cohort to each individual. We demonstrate CG in these turtles based on three different analytical approaches: changes in coefficients of variation in size-at-age, generalized additive model regression analyses of somatic growth, and linear regression of age-specific growth rates. As a result of CG, variation in size-at-age in these juvenile loggerheads is substantially reduced. Thus, size is a better predictor of age than expected based on variation in growth rates. CG decreases with age, apparently as loggerheads gain greater control over their movements. In addition, we have evaluated for the first time in wild sea turtles the time-dependent nature of somatic growth rates, but there was no significant cohort effect. Our results address critical gaps in knowledge of the demography of this endangered species.

Corresponding Editor: R. J. Etter.

STOCHASTIC = CHANCE RANDOM PROBABILITY OR UNCERTAINTY

196

土木学会選奨

土木遺産菅橋

土木遺産菅橋は1933年に完成した木曽谷で初めての鉄筋コンクリートアーチ橋であり2011年に土木学会選奨土木遺産に認定されています。

The Suge Bridge, a civil engineering heritage, was completed in 1933 and is the first reinforced concrete arch bridge in the Kiso Valley, and was recognized as a civil engineering heritage by the Japan Society of Civil Engineers (JSCE) in 2011.


since 1992
名古屋港水族館
来館記念

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2026 6 JUNE

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PORT OF NAGOYA PUBLIC AQUARIUM

2026 7 JULY

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PORT OF NAGOYA
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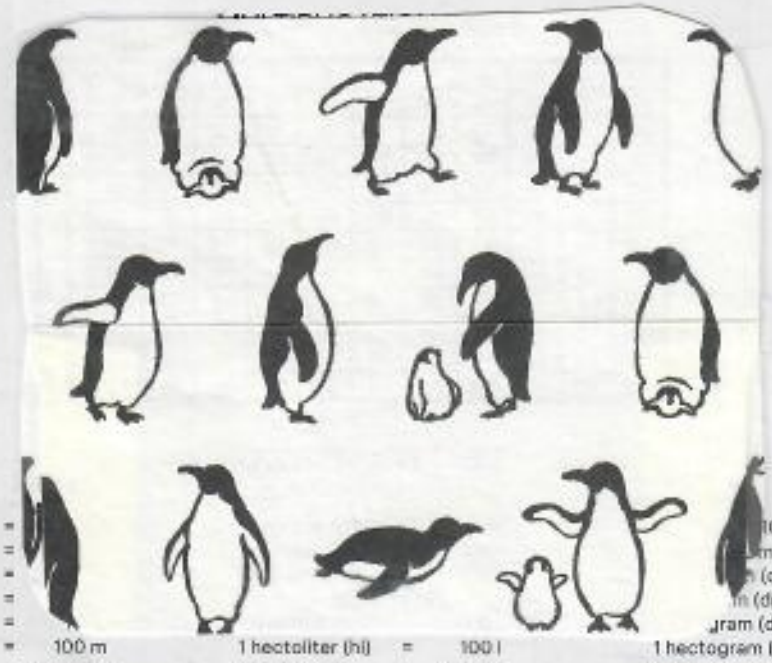

LENGTH

1 meter (m) = 100 cm	=					100 cg	=	1,000 mg
1 millimeter (mm)	=					mg)	=	.001 g
1 centimeter (cm)	=					(cg)	=	.01 g
1 decimeter (dm)	=					m (dg)	=	.1 g
1 dekameter (dkm)	=					gram (dkg)	=	10 g
1 hectometer (hm)	=	100 m	1 hectoliter (hl)	=	100 l	1 hectogram (hg)	=	100 g
1 kilometer (km)	=	1,000 m	1 kiloliter (kl)	=	1,000 l	1 kilogram (kg)	=	1,000 g

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2. **VERB–**
3. **ADJEC**
4. **ADVEF**

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- Some verbs

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- Punctuation

A **comma** is used to group words and phrases that belong together. It is also used to denote a slight pause, as with items in a series and interjections.

A **colon** is used prior to a list or other elements that rename or restate what has been previously stated.

A **semicolon** is used to separate independent clauses or to divide a series of longer phrases.

An **apostrophe** is used to indicate the possessive case of nouns and to form contractions.

A **hyphen** divides one word into syllables or joins multiple words.

Quotation marks are used around the exact words someone spoke. Use with titles of songs, short stories, chapter titles, short plays, episodes of television programs, magazine articles, and poems.

Italics are used with the titles of books, movies, newspapers, television programs, magazines, and long plays. (In handwriting, use **underlining**)

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