

SOUTH PACIFIC NEWSLETTER

March 2019 No.30



KAGOSHIMA UNIVERSITY
INTERNATIONAL CENTER FOR ISLAND STUDIES
(formerly RESEARCH CENTER FOR THE PACIFIC ISLANDS)

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Cover photo: Weaving traditional mat in front of her house in Mili island, Republic of the Marshall Islands, September 2018 (by Hiroto TAKAMIYA)

RESEARCH ON INFLUENCE THE LIFE IN THE REPUBLIC OF THE MARSHALL ISLANDS (MILI, TAKAIWA, NALU OF MILI ATOLL) BY GLOBALIZATION AND GLOBAL WARMING

Globalization and global warming are affecting people's life in the world. Especially these are affecting many small islands, because the small islands are featured by the size of smallest and delicateness. For example, global warming leads temperature increase which affects sea level rise and this will affect low land very much. There are many low lands in the pacific, ex atoll. To improve this situation, at first we should know the situation and people's idea. This research is aimed to study how globalization and global warming affect the life in each island in Mili, Takaiwa, Nalu of Mili Atoll of the Republic of the Marshall Islands on 23–24 September, 2018

BILINGUAL EDUCATION ON MILI ATOLL: A CASE STUDY OF ELEMENTARY SCHOOLS ON MILI ISLAND, TAKAIWA ISLAND AND NALU ISLAND

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People in the Marshall Islands use both Marshallese and English in their daily lives. Reflecting this bilingual situation, school education is done in two languages. My research on Mili Atoll consisted of the following three questions.

- 1) What method do teachers use for bilingual education?
- 2) What is the status of Marshallese at school?
- 3) What kind of problems do teachers and students have?

On Mili Atoll, I visited three islands, Mili Island, Takaiwa Island and Nalu Island.

On Mili Island, I interviewed two elementary school teachers. They told me how they teach subjects in two languages. According to them, students buy their textbooks from the United States. Apart from the lower grades, they do not use Marshallese textbooks. There are not so many opportunities for them to learn Marshallese systematically.

On Takaiwa Island, I attended an elementary school class with the permission of the teacher. The class was composed of students from 3rd grade to 5th grade. They were learning mathematics with an American textbook. Before they solve the problems, the teacher makes the students read the English problem sentences aloud. But when the teacher explained, she spoke mostly in Marshallese.

On Nalu Island, a teacher allowed me to see the Marshallese lesson. Students were doing spelling tests. They wrote Marshallese words on the blackboard and explained the meaning in English. The teacher spoke in both Marshallese and English.

In these three elementary schools on Mili Atoll, teachers did not have a systematic program for bilingual education. For students, Marshallese is their mother tongue. They always speak Marshallese outside of school. But Marshallese is not a language for reading and writing. Their written language is English. Almost all students were hoping to live in the United States in the future, but they did not seem perfect in English.

COASTAL EROSION AND SEASHELL COLOUR DIVERSITY INFLUENCED BY ENVIRONMENTAL CHANGES IN THE REPUBLIC OF THE MARSHALL ISLANDS

Kei KAWAI

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Environmental change has a great influence on the habitat and the ecology of living organisms. For example, global warming, which is increasingly recognised as a leading cause of environmental change, can lead to erosion in coastal areas and changes in the distribution of organisms. The purpose of this study of the Mili atoll in the Marshall Islands of the Pacific Ocean was to examine, 1) the degree of erosion of the coastal area and 2) the shell diversity of marine snails in the coastal area (especially shell colour diversity).

The survey was conducted in September in the Mili Atoll in the Republic of the Marshall Islands. The state of erosion was studied by conducting a survey around the coast of the island. To study the shell colour diversity, around 50 specimens of the marine snail *Nerita plicata*, which normally live in the upper part of the intertidal zone, were collected at

several points around the coast and the shell colour was described. The shell colour diversity of this species has previously been recognised and is known to vary as a function of both environmental and genetic factors. For example, KAWAI hypothesised that this shell colour diversity is maintained by pressure from predators.

In the Mili Atoll, the beach environment is distributed in the inner bay of the atoll, from the northern part of the island to the south-east part. In part of the south-eastern area of the inner bay, fallen palm trees were observed and sand was partly removed to expose underlying coral rock. However, several metres further, the sand was not absent. In the southern part of the island, reefs in close proximity to the shore were impacted by many coral rock blocks measuring around 50 cm (Fig. 1). This is thought to be the result of a large wave that transported the rock blocks onto the reef. This is generally a phenomenon that is commonly found in locations impacted by large waves, demonstrating that waves are high in this area. In the south-west, there is a turret constructed by the former Japanese army, but its base may be destroyed by waves.



Fig. 1 Transported rock blocks onto the reef by waves.

When walking along the coast from the south of the island to the west bank, many

areas were noted where palm tree roots were exposed due to coastal erosion. Conversely, as the north and east are located inside the atoll, wave action on these beaches is gentler.

According to the islanders, two roads used to exist in the southern part of the island, but only one now remains. This is believed to be due to the erosion of the land by wave action. The islander said that waves become higher around December, therefore erosion may be most efficient at this time.

A large number of the marine snails lived on the coral rocks on the coast (Fig 2). Most individuals had shells that were uniformly white in colour, with very few individuals featuring stripes on the shell. The surveyed area is an island constituted of coral, and this result may be due to the white substrate in the snail habitat. This result is consistent with the results from other Pacific island regions, supporting the hypothesis that this shell colour diversity is maintained by pressure from predators.

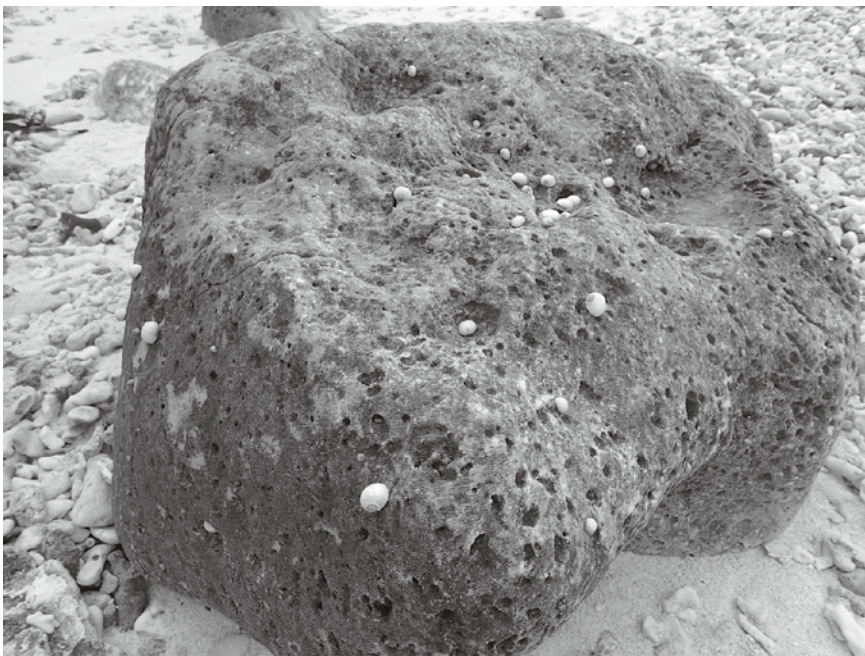


Fig. 2. Marine snail *Nerita plicata* on the coral rock.

MOSQUITO HABITATS IN MILI ATOLL OF THE REPUBLIC OF THE MARSHALL ISLANDS

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Mosquitoes are blood-sucking insects, and bite human, animals and birds. Moreover, mosquitoes transmit pathogens, filaria, Dengue virus and Zika virus. In the Republic of the Marshall Islands, lymphatic filariasis, also known as elephantiasis, was a public health problem. But, the Pacific Programme to Eliminate Lymphatic Filariasis and the Global Programme to Eliminate Lymphatic Filariasis achieved elimination of lymphatic filariasis from the Republic of the Marshall Islands in 2017 (WHO 2017). In Yap state of Federated States of Micronesia, outbreaks of dengue virus and zika virus occurred in 1995 and 2007, respectively (SAVAGE *et al.* 1998, DUFFY *et al.* 2009). Recently, Zika virus was reported in the Marshall Islands (WHO 2016). It still needs to pay attention to mosquito-borne diseases in the Marshall Islands. To prevent such mosquito-borne diseases, the most important and effective method is mosquito control.

Mosquito survey was conducted in Mili, Takaiwa, Nalu of Mili Atoll of the Republic of the Marshall Islands on 23–24 September, 2018. Mosquito larvae were found in pond, coconuts shell, plastic bucket, can, tree hole (Fig 1). To prevent Dengue virus and Zika virus, it needs to reduce occurrences of *Aedes* species. In Mili Atoll, *Aedes aegypti* is inhabited. This species is the primary vector of Zika fever and Dengue fever. In Mili Atoll, *Ae. aegypti* was particularly distributed around the residential area. They used trash (can, glass bottle, plastic container, etc.) mainly from people's activities. Although cleaning activities are done in the communities of Mili Atoll, mosquito larvae were inhabited in the trashes. This means that residents can reduce mosquitoes by properly dispose of trash. To practice the mosquito control, it is essential to make the residents understand and Zika fever and Dengue fever. Continuous enlightenment activities with local governments for residents are required.



Fig. 1. Various mosquito containers in Mili Atoll, (a, b) coconuts shell, (c) plastic bucket, (d) pond, (e) tree hole, (f) can.

References

- DUFFY, M. R. *et al.* 2009. Zika virus outbreak on Yap Island, Federated States of Micronesia. *The New England Journal of Medicine*, 360: 2536–2543.
- SAVAGE, H. M., FRITZ, C. L., RUTSTEIN, D., YOLWA, A., VORNDAM, V. and GUBLER, D. J. 1998. Epidemic of dengue-4 virus in Yap State, Federated States of Micronesia, and implication of *Aedes hensilli* as an epidemic vector. *The American Journal of Tropical Medicine and Hygiene*, 58(4): 519–524.
- WHO. 2016. Zika Virus Microcephaly and Guillain-Barré Syndrome. Situation Report 26 February 2016.
- WHO. 2017. Marshall Islanders triumph against lymphatic filariasis. Retrieved 31 January, 2019, from https://www.who.int/neglected_diseases/news/Marshall_Islanders_triumph_h_against_lymphatic_filariasis/en/.

ETHNOBOTANICAL STUDY ON CHILI PEPPERS (CAPSICUM SPP.) IN MILI ATOLL, REPUBLIC OF THE MARSHALL ISLANDS

Sota YAMAMOTO

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I surveyed the nomenclature and usage of chili peppers (*Capsicum* spp.), in particular *C. frutescens*, in Mili Atoll, Republic of the Marshall Islands to identify the relationship between people and *Capsicum*. Mainly *C. frutescens*, especially the green immature fruit color type, was cultivated on Mili, Takaiwa, and Nalu islands in Mili Atoll. Chili peppers are called *pepa* in Mili Atoll, which is similar to *pwepuh*, the local name on Kosrae Island, the Federated States of Micronesia (FSM). These local names seem to be related to *peffer* in German or pepper in English. Local people who preferred spicy flavors ate fresh *C. frutescens* fruits raw or together with food. Some added fresh fruits to soups, and some used them to make a dipping sauce, a mix of fruits and salt (or soy sauce), occasionally with vinegar to eat with raw and/or cooked fish. People throughout Mili Atoll appeared to use dried fruits rarely, similar to people in the FSM. They did not eat leaves of chili peppers as a vegetable although the leaves, especially *C. frutescens*, are used in soups and in mixes of vegetables in the FSM.

PREHISTORY AND PEOPLE OF THE REPUBLIC OF THE MARSHALL ISLANDS

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Introduction

Almost all human groups are interested in their origins: when and where did their ancestors come from? For example, Japanese are so interested on this theme, not only scholars but also lay people paid great attention on when and where their ancestors came

from (SHINODA 2016). However, there are often large gap on the knowledge between the most recent scientific findings on the theme and what lay people know about their origin. Are people of the Marshall islands interested in their origin? What do they know about their origin? In order to understand these questions, I have interviewed twelve Marshall islanders from Mili, Takaiwa, Nalu of Mili Atoll between 23rd and 24th of September, 2018. While sample number is small, this report presents the preliminary results of the survey.

Method

The sex and age categories of the informants are shown in Table 1. The interview mainly consists of three questions.

- 1) Are you interested in the origin of the Marshall islanders?
- 2) When and how the island was created or formed?
- 3) Do you know when and how people came to the island?

Results

Table 2 summarizes the results of the interview. On Question #1, all of them said they were interested in their origin. Regarding to Question #2, all of them did not know correctly when was the island formed. On the formation of the island, seven people believed in creation myth. With regard to the third question, to which the author of this report had great interest, no one knew when people came to the island for the first time. Interestingly, five people thought their ancestors came from Kiribati.

Table 1. The ages and sexes of the informants.

age	Male	Female
20-29		2
30-39	2	
40-49	3	2
50-59	2	
60-69	1	
total	8	4

Table 2. The summary of the survey.

	Yes	No
question #1	12	0
question #2		
when	0	12
how	0	12
question #3		
when	0	12
how (from where)	0	12

Discussion and Concluding Remarks

According to RAINBIRD (2004), the atolls of the Marshall islands were formed after

ca.3000 years ago, and habitable space for human settlement was developed 1000 years after the formation of the atolls. While people (*Homo sapiens*) first appeared into Australia and New Guinea around ca. 50,000 years ago, they did not spread into the Micronesian islands and beyond for several thousand years later. Archaeological evidence indicates that the Marshall islands first witnessed human colonization between ca. 2500 and 2000 years ago. (INTOH 1997, RAINBIRD 2004). They probably colonized the atolls from Melanesia area (INTOH 1997, RAINBIRD 2004).

All of them did not know when it happened. Seven people believed in mythological story on the formation of the island. While all twelve people were interested in the origin of their ancestor, they did not know when people colonized the island for the first time. Some said it was before the World War II. Interestingly, while five people were not able to answer when colonization took place, they said their ancestors came from Kiribati.

No one told me that they ever studied prehistory of the Marshall islands. It is unfortunate that they did not have an opportunity to learn about prehistory of the islands. Some thought the older people know about their origins. However, the older generations also did not know much about the origins of the islanders. While I was interviewing the islanders, I strongly felt the islanders should have more opportunity to learn about their origin and prehistory of the island in school education.

References

- INTOH, M.1997. Human Dispersals into Micronesia. *Anthropological Science*, 105(1):15-28.
- RAINBIRD, P. 2004. *The Archaeology of Micronesia*. 301pp., Cambridge University Press, New York, USA.
- SHINODA, K. 2016. *DNA de kataru Nihonjin Kigen-ron* (The Origins of the Japanese based on DNA analysis). 272pp., Iwanami shoten: Tokyo. (in Japanese).



The Mili Research Members with the Chief

(from right, S. YAMAMOTO, Y. OTSUKA, the Chief, K. KAWAI, H. YANAGAWA, and H. TAKAMIYA. Photo by K. KAWAI)

Research Seminars

No.184, 22 January 2018

“Koreans of the South Sea Islands: The Copra industry and the Koreans in Yap Island during the Japanese Period”

Sung Youn CHO (Research Center for the Pacific Islands, Kagoshima University: Jeju National University)

[ABSTRACT]

The objective of the present research is to investigate into the history of a Korean family who lived in Yap Island of the South Sea Islands during the Japanese colonial period. By investigating into the Japanese community that lived in Yap Island which was one of the main islands in the South Sea Islands, I will provide a review of adaptive strategy of Koreans who were part of the community.

The person that I interviewed was Doosung KO, who lives in Jeju Island in Korea now. He was born in 1934 at Yap Island, lived there until he was 7 years old, and returned to Jeju Island in 1940.

His father Myeongryoe KO was born in 1902, opened a store, and engaged in the work of collecting Copra from the locals. KO went around the island to collect coconuts. In the late 1930s, he opened hospital and restaurant in Yap Island and became a successful businessman who rubbed shoulders with Japanese. In 1940, he came back to Jeju Island and escaped the pacific war.

Meanwhile, HWANG Young-sam, who lived on the island of Satawal Island, and collected Copra by mobilizing residents. He was killed by the villagers, and after that event, HIJIKATA Hisakatsu entered the island with his disciples, and acts as a Copra collector on the other hand, as an artist, as a folk scholar.

The two cases show me about Koreans activities how to engage in commercial activities, unlike those of the Koreans who were forcefully mobilized during the Pacific War. It would have been possible for the Korean people to gain recognition in their own networks by gaining recognition from the Japanese community in order to succeed in the South Sea Islands.

No.185, 19 February 2018

“Thoughts and Needs during Pregnancy and the Delivery Period of Mothers with Experience of Delivery outside Their Home Island: Through Focus Group Interviews”

Yuko NAKANO and Naomi INOUE

(Kagoshima University Graduate School of Health Sciences)

[ABSTRACT]

The objective of the present study is to elucidate feeling and needs of mothers living on remote islands who have no choice but to give birth outside their home island due to the absence of delivery facilities on the island. Focus group interviews were conducted on 10 mothers who had experienced delivery outside their home island by dividing them into those who were natives of their home island (n=4) and those were not (n=6).

Analysis showed that mothers who had experienced delivery outside their home island faced the “difficulty of living as a pregnant woman on an island with no obstetric facilities”, “frustration of living outside home island”, and “lingering financial concerns”, amid which they had the “realization that family is a big presence”, and that they spent their pregnancy and delivery period based on the feeling of “wanting to protect this pregnancy”. In addition, the following needs were identified: “want enhancement of support for living outside home island”, “want to give birth on home island”, “want advice at time of prenatal checkup”, “want opportunities to consult midwives”, and “want increased cooperation between home island and hospitals”.

These results indicate that enhanced support is necessary for women living on their home island and mothers living outside their home island, and that mothers who are not natives of their home island have a greater need for support during pregnancy. Enhancement of support systems including provision of information regarding matters such as delivery outside home islands and the use of peer support groups was considered necessary as support for mothers giving birth outside their home island.

No.186, 23 April 2018

“Life history of Ryukyu-ayu *Plecoglossus altivelis ryukyuensis* in Amami-oshima Island”

Gen KUME (Faculty of Fisheries, Kagoshima University)

[ABSTRACT]

The Ryukyu-ayu *Plecoglossus altivelis ryukyuensis* is a subspecies of the ayu *Plecoglossus altivelis altivelis*, which is distributed widely from Japan and the Korean Peninsula to northern Vietnam. The subspecies is commonly called the “Yaji” and has been

consumed locally since ancient times. *P. altivelis ryukyuensis* have some different morphological features from *P. altivelis altivelis*. Their size is small: adults reach only 10-15 cm total length. The subspecies now inhabits only Okinawa Island and Amami-oshima Island. The wild population of Okinawa Island has been extinct since 1978. Fry produced by parent fish from Yakugachi River on Amami-oshima Island were stocked into the rivers of Okinawa Island in 1992, and some landlocked populations have now successfully settled in reservoirs in northern Okinawa Island. The subspecies was designated as critically endangered by the Kagoshima Prefecture and Ministry of the Environment, and fishing them has been completely banned since 2004. Although administrative support contributes to the conservation of the Ryukyu-ayu, the subspecies is continually facing the risk of extinction. We have practiced various life history studies on the subspecies intended to conserve them. In the presentation, I introduce the latest research results on their life history and current outreach programs.

No.187, 28 May 2018

“Island Biogeography of Terrestrial Snail from Islands of Sabah, Malaysia”

Chee Chean PHUNG (Institute for Tropical Biology and Conservation, University of Malaysia Sabah)

[ABSTRACT]

Islands always held special attraction to scientist as model systems in biogeography and evolutionary studies. In Sabah, there are about 500 islands with various degree of isolation and size, and have experienced different climatic or historical processes. Unfortunately, the up-to-date knowledge about the island biodiversity in Sabah is scarce in spite of the fact that Sabah is situated within one of the megabiodiversity hotspots. Using land snail as subject, an annotated checklist of land snail from 24 west coast islands of Sabah was presented and was explained the effect of island area, isolation on species composition and species richness. The phylogeography pattern of selected land snail species (i.e. *Leptopoma pellucidum*) from northwest islands was also demonstrated to understand the present genetic distribution and structure, and infer underlying historical processes by calibrating the tree with molecular clock. A total of 67 land snail species were documented from 24 west coast islands of Sabah based on 133 systematic sampling plots, collection database and published records. Land snail composition pattern showed strong nestedness pattern and was influenced by both isolation and area. The results of this study demonstrated that the species richness on Sabah's island was largely determined by the island area rather by its isolation, which in agreement with most studies on continental islands. With respect to phylogeography of *L.*

pellucidum from northwest islands, the results revealed that its genetic structure was categorized into three major lineages. Surprisingly, time-calibrated tree showed that the genetic divergence time does not correspond with island isolation due to sea level rising during Last Glacial Maximum. The lineages were estimated to have diverged during the middle and late Pleistocene. Earlier periodic interglacials and Pleistocene climate fluctuation might cause intra-specific divergence. This study reveals biogeography and evolutionary processes of Borneo Island.

No.188, 18 June 2018

“Several Numerical Calculations for Tsunamis and the Characteristics of the Isolated Islands in Japan based on Multivariate Analyses”

Taro KAKINUMA (Graduate School of Science and Engineering, Kagoshima University)

[ABSTRACT]

First, two numerical models for water motion are introduced, i.e., a 3D Eulerian method, and a 2D Lagrangian method. The tsunamis due to both a submarine earthquake, and a landslide, are simulated, using these numerical methods. Second, the characteristics of the isolated islands in Japan, are discussed based on the principal component analysis, as well as the cluster analysis. I focus attention on three parameters of isolated islands: economic power, potential capacity, and inhabitability.

No.189, 23 July 2018

“Ixodid Ticks in Amami-oshima Island and Lifecycle of Tick-borne Phleboviruses”

Keita MATSUNO (Faculty of Veterinary Medicine, Hokkaido University)

[ABSTRACT]

The recent (re)emergence of tick-borne viruses has complicated the epidemiological landscape of tick-borne infectious diseases, posing a significant challenge to public health systems worldwide. In Japan, fatal cases of severe fever with thrombocytopenia syndrome virus (SFTSV) and tick-borne encephalitis virus infections were recently reported. However, to understand whole virus populations in ticks, the genetic diversity of viruses and/or low virus titers in ticks have hampered us. Thus, we have employed a comprehensive screening method to identify a variety of viral pathogens in ticks. By far, more than three-thousand ticks were collected in Japan (including approximately a hundred ticks collected in Amami-oshima and Tokunoshima islands), and a variety of viruses was discovered in various species of ticks. Phylogenetic analysis suggests that phleboviruses in ticks, including

SFTSV, have co-evolved together with ticks. While our screening has not identified any viruses in the island ticks, monitoring on pathogens may need to be continued to prepare for the future emergence of tick-borne diseases..

No.190, 18 September 2018

“History of Ryukyus and Satsuma in Technology Exchange”

Kosei YAMADA (Okinawa Prefecture Board of Education)

[ABSTRACT]

In the pre-modern era, the Satsuma clan and the Ryukyu kingdom had complex and diverse relationships. There were active people and objects coming and going. Also, exchange of various technologies was done. For example, in the Ryukyu Kingdom doctors and cooks frequently undergo training in China and Satsuma clan. They returned home and got a position in the country. Contributing to the country using technology in various scenes. For that reason, in the Kingdom of the Ryukyus, we devised a person who introduced technology into a samurai.

Moreover, we used technology in various scenes to show the position of the Ryukyus. Satsuma clan also used technology to conduct diplomacy. We incorporated technology into our own culture. Training and diplomatic negotiations became opportunities for technology exchanges and had a major impact on the cultural formation in the regions.

No.191, 12 November 2018

“The Recent Results of Excavations in the Southern Part of Kikai-cho”

Takashi NOZAKI (Kikai-cho Archaeological Center)

[ABSTRACT]

From the year 2003 in Kikai-cho, we have started a series of archaeological researches resulting from the Farmland Development Project, and have excavated a huge area in central and southern part of the Island. Since the excavation began, it have been attracted the attention of the many researchers by its findings.

From the result of the excavation 2003-2008 of Gusuku ruins, located in the center of Kikai Island, it has been understood that this ruin was established as a trading base in the relationship between Ancient Japanese Nation and the Nansei Islands in 9th-10th century. It was a great discover of that moment that just only little researcher had imagined.

From 2011 we began investigating the Tekuzuku area, located in the southern part of the island. The area is located on the coastal terrace side, and we found many structures such

as a ditches, pillar holes, tombs etc. We had also found a great quantity of Chinese ceramics of the 14th and 15th century during the excavation. We are working on analysis at present.

From 2013, we started investigating central area of Araki, located in the southern part of the island. Here we detected several ruins of Late Jomon period, and we were finding many pit houses and its associated artifacts in good condition. The area is still under investigation.

No.192, 10 December 2018

“Role and Prospects of Native Domestic Animals in the Satsunan Islands”

Yoshitaka NAKANISHI (Faculty of Agriculture, Kagoshima University)

[ABSTRACT]

Since native domestic and feral animals inhabit in Satsunan Islands, Kagoshima Prefecture, where a high level of biodiversity has been conserved, they are regarded as one of the most important and the rarest animal genetic resources from the academic point of view. Extraneous animals also inhabit in some islands, where they give harmful impact on agriculture, a species indigenous to the island and environment together with part of feral animals. Especially, Kuchinoshima feral cattle, Tokara native horses, Tokara native goats and their crossbreds inhabit in Tokara Islands, and the former two are conserved under human management, whilst the latter two are fed artificially or become feral by the abandonment of feeding. The authors have engaged in studying conservation and utilization of native domestic animals in terms of the conservation of rare animal genetic resources. Recently there have been serious problems that some feral animals affect agriculture and environment, thereby we conduct habitat survey as well as investigation on feeding situation of the animals. Of all native domestic animals, Tokara native goats are the most hybridized, and they are called *Shimayagi* goats in Satsunan Islands except Tokara Islands. *Shimayagi* goats are mainly used for meat or companions. *Shimayagi* goats which were abandoned in Amami Oshima (feral goats), invaded farm and caused damage to agricultural fields and rare plants, resulting in vegetation destruction and soil erosion.

No.193, 15 January 2019

“Why do Mites and Ticks Have the Most Number of Valid Species in Terrestrial Arthropods Excepted Insects?”

Satoshi SHIMANO (Science Research Center, Hosei University)

[ABSTRACT]

The taxon-group of Acari has most number of valid species (almost 55,000) in Arachnida. However Acari was disappeared in textbooks of invertebrate nowadays. Acariformes and Parasitiformes sensu lato are used as separated taxon-groups instead of Acari. Although two-name system, tick (sucking blood) and mite (others) were common for meaning Acari in some countries, Japanese use one word “*dani*” for Acari. French use three categories, tick, mite and ciron (ceron). The “ciron” means cheese mites (and some small bugs) and was used as the symbol of minimums in some French literature (e.g. Fables by Jean de la FONTAINE in 1668, Pensées by Blaise PASCAL in 1670). Acarine species are recorded almost 2,000 in Japan, and 1% (almost 20 species) of them are harmful as common sucking blood ticks. Acari have diverse eating habits, while other members of Arachnida are only predators. The diversity of Acarine eating habits may have maintained species diversity of them. Oribatida as a decomposer has various physical appearance. The much morphological diversity is a strategy to defend against predators. The oribatid mite have not only morphological defense but also chemical defense as chemical secretion from opisthonotal glands and physical defense as jumping. These various defense strategies are also helpful in maintaining diverse species.

Special Research Seminar, 9 October 2018

“Textile Prospecting and *Kusakizome* Alchemy: New Generation Dyers in Contemporary Rural Japan”

LINTON, Charlotte (School of Anthropology and Museum Ethnography, University of Oxford)

[ABSTRACT]

Built on the foundations of traditional textile histories, *kusakizome* – dyeing with plant materials and naturally occurring mordents (fixing agents) – is increasingly returning as a standalone industry in rural locales across Japan. While historically, such techniques were mostly used for dyeing yarn for weaving, designers nationally and internationally are now commissioning the dyeing of fashion conscious clothing and interior objects and textiles, promoting the results as a natural alternative to harmful chemical colourants. In Amami

Oshima, a new generation of dyer, mostly I-turn and U-turn migrants, lean on the authenticity and establishment of *Oshima Tsumugi*, the infamous but financially troubled locally produced kimono cloth to market the heritage of processes such as *aizome* (indigo) and *dorozome* (mud) to an outsider customer base. Concurrently, the ‘naturalness’ of kusakizome techniques, and their material constituents are built into a verbal and visual narrative that support claims of environmental sustainability and place based authenticity.

Recent Publications

+++ Journal +++

South Pacific Studies Vol.39, No1, 2018

Research Papers

FUNAKI K. P.: Theoretical Perspectives of Gross National Generosity (GNC): Philosophy for a Dignified Pacific to Enrich the World

PAPPOUTSAKI E. and KUWAHARA S.: Mapping Small Islands Communicative Ecologies: a Case Studies from the Amami Islands

South Pacific Studies Vol.39, No2, 2019

Research Note

SUMB A.: International Tourists' Perceptions of Safety and Security Issues in Madang Province, PNG

+++ Occasional Papers +++

Occasional Papers No. 59 (March 2018)

2017 Project Progress Report: Biodiversity and Its Conservation in the Satsunan Islands.
(SUZUKI E. and KAWAI K. eds.)

+++ Kagoshima University Toughoken Booklet +++

No.8 WATANABE Y.: Distribution in Tokara Islands of the Early Modern Period: Ceramic Archaeological Approach (March 2018)

No.9 TOMINAGA S.: Fruit Production in Kagoshima-Under Various Weather Conditions Stretching about 600km North and South (March 2018)



Kagoshima University Toughoken Booklets No. 8 and No.9

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