



Local Knowledge about Crocodiles in Palau



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Introduction

The Palau Conservation Society was contracted by The Nature Conservancy to conduct interviews with people knowledgeable about Palauan saltwater crocodiles (*Crocodylus porosus*), known locally as *ius*. The goal of the interviews was to obtain local knowledge about the habits, status and uses of crocodiles in Palau. What comes through as a result of these interviews are some of the commonly held perceptions about crocodiles in Palau, as well as some information about their preferred habitats and recent behaviors. The history of crocodile hunting and use was also a subject of the interviews, enabling a comparison of some of the changes that have occurred over time. The results of these interviews are meant to complement a biological survey of crocodiles that was conducted in Palau in June 2003 (Brazaitis 2003; Brazaitis and Eberdong 2003).

Palau is home to the only population of saltwater crocodiles in Micronesia. The first recorded capture of a crocodile occurred in Ngatpang around 1900, during the German administration. In 1916, Japanese surveys documented crocodiles in Palau (Messel and King 1991).

A Palauan legend recounts the relatively peaceful coexistence between people and crocodiles in earlier times. The legend describes how a man named Ksau overcame a crocodile's hunting magic with stronger protective magic that allowed his children to swim in the Ngerdorch River safely. The crocodile agreed not to harm children if they

were rubbed with a new coconut leaf, that was then tied around their necks.

Early in the 20th century, Palauan crocodiles were extensively killed for their skins. Some crocodiles were imported from the Philippines and Papua New Guinea to be raised on a farm in Palau for their skins. Many of these crocodiles were eaten by Japanese soldiers during World War II.

In 1965, a man was killed by a crocodile. This led the Trust Territory government to institute a trapping program and then a bounty program in order to remove all crocodiles from Palau. Crocodiles were hunted for their skins so extensively, that by 1980, there were so few crocodiles left that the trade had to be halted.

There are no Palauan laws that explicitly prohibit the killing of crocodiles. There is a national ban on firearms that effectively removed from use the most popular weapon for hunting crocodiles. Palau is not a signatory of the Convention on International Trade in Endangered Species (CITES). However, there is confusion about the laws, and many people actually believe that it is now illegal to kill crocodiles in Palau.

Palauan crocodile populations appear to be rebounding after their near extinction. Although they are seen more often, there have been few recent incidents where someone was hurt by a crocodile. This has not changed people's perceptions. Crocodiles are still not popular in Palau. They are generally viewed as

both a threat to people as well as competition for mangrove crabs and reef fish. There may be increased interactions between people and crocodiles as their numbers increase and as they move closer to human habitations. Conservation of crocodiles populations in Palau will depend upon decreasing the perceived and actual threats of crocodiles to people.

This study on local knowledge of crocodiles provides some insight into the perceptions held by some people in Palau about crocodiles. The people interviewed for this study are those who are locally known to have some knowledge about crocodiles. Their observations about crocodile behavior and perceived threats provide depth to the biological surveys that were conducted to assess the status of crocodiles in Palau.

Methods

A total of 46 men were interviewed from December 2002 to February 2003. These men are all known by key informants to be hunters, either presently or in the past, of crocodiles. A team of one or two interviewers visited the men at their homes or in meeting areas and asked questions from a written questionnaire (see Appendix 1). The men were also encouraged to refer to topographic maps to locate the places where crocodiles are frequently seen. Interviews generally took an hour or less.

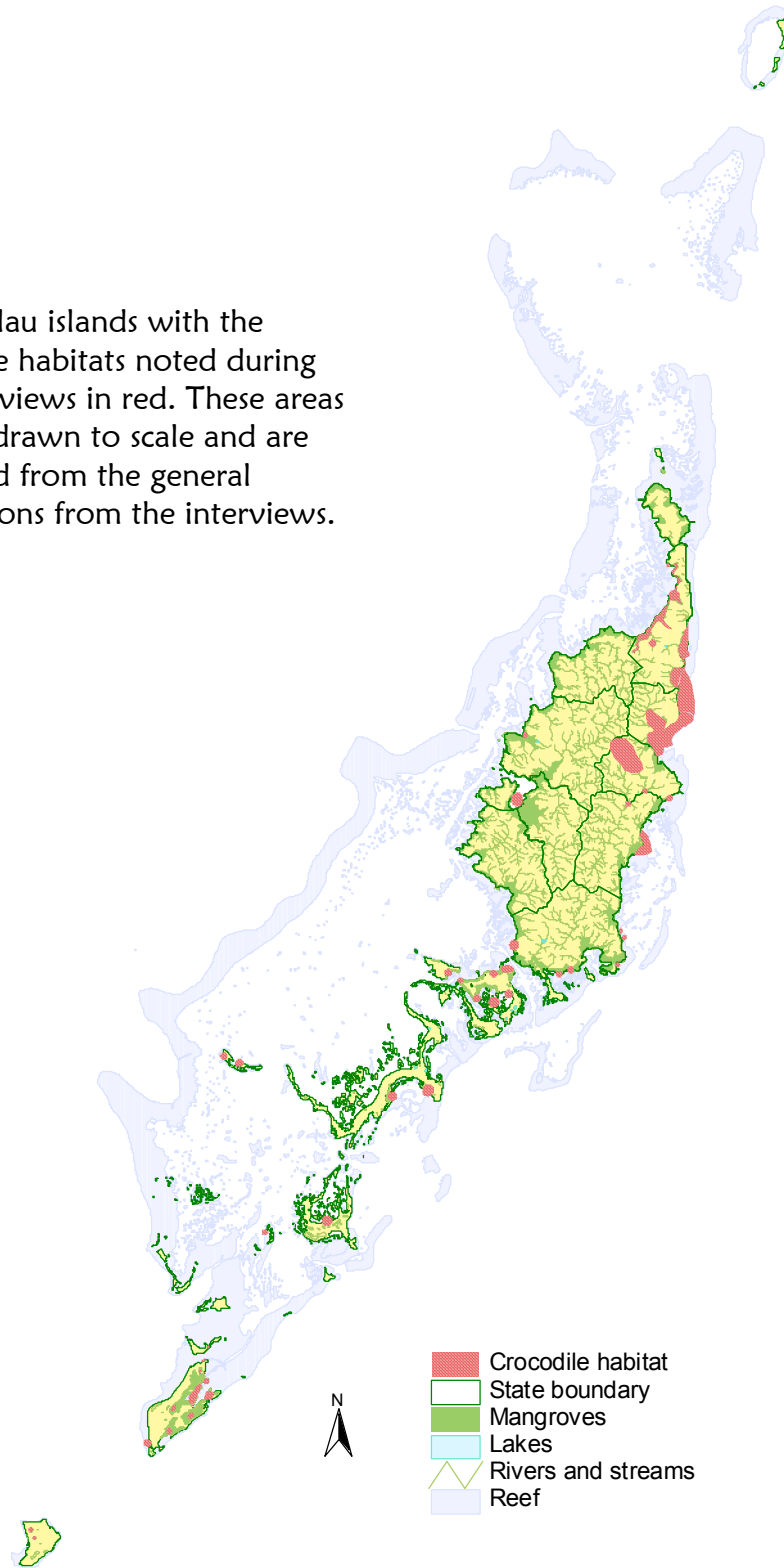
responses. What they do indicate are some of the commonly held perceptions of the men who are most familiar with the animals in Palau. The lead interviewer, Joshua Eberdong, is a trained and skilled crocodile breeder and is locally known as the person who knows most about Palauan crocodiles. It is hoped that his presence during the interviews created an atmosphere in which the men who were interviewed felt comfortable giving honest, or not overly exaggerated responses to the questions.

The number of interviews that were conducted in each of 13 of Palau's 16 states are shown in Table 1 below. Only states with known crocodile populations were surveyed.

The results of the interviews were compiled in a database and processed into tabular form. The results are based on qualitative information from fishermen, and as such are not reliable to determine the actual number of crocodiles in Palau, although some rough estimates can be extrapolated from the

Aimeliik	2
Airai	3
Angaur	8
Koror	5
Melekeok	5
Ngaraard	4
Ngarchelong	2
Ngardmau	1
Ngaremlengui	1
Ngatpang	2
Ngchesar	4
Ngiwal	3
Peleliu	6
Total	46

Main Palau islands with the crocodile habitats noted during the interviews in red. These areas are not drawn to scale and are compiled from the general descriptions from the interviews.



Results and Discussion

Distribution, movements, habits and general behavior

Crocodiles had been spotted in the past year in all states where interviews were conducted (Table 2).¹ Only two of the men interviewed had not seen a crocodile in the past year. When asked how many had been seen over the past year, responses ranged from 1 to 100. A total of the averages by state are shown in Table 3. State averages ranged from 6 to 32. The states with the highest averaged estimates are: Peleliu, Melekeok, Ngardmau, Ngatpang, and Ngaremlengui. These numbers are all estimates and not actual counts. There are many reasons that could account for the variability in responses. One possible explanation is that the larger numbers may indicate that the crocodiles seen were juveniles when it is possible to see many at a time.

The map on page 3 shows the locations where the respondents had seen crocodiles in the past.² Most of the areas indicated are coastal mangroves. Other habitats that were described as crocodile habitats include rivers, the area around Lake Ngardok, Ngaremeduu Bay and pits left from old mining operations in Angaur. Crocodiles are occasionally seen around the Rock Islands of Koror. They have not been seen in or near Kayangel.

Table 4 summarizes the responses to the question about when crocodiles are most often

seen: 25% said they were seen at all times, 20% said they were seen at night, 16% said they were seen during the day.

There was a lot of variability in response to a question about how long the crocodiles stay in the area (Table 5). 24% said the animals migrate. However, 15% said they are territorial (meaning they stay in the same place), 15% said they stay for a long time, 22% said they are in the local area all year. These responses indicate that the crocodiles tend to stay in a particular place for a great deal of the time, although they do move from one area to another. It was not clear from the interviews whether there was any seasonality to their movements.

Table 6 lists the estimated sizes (in feet) of the crocodiles, averaged by state. The overall average for all of the responses is 10 feet, however the average size that was mentioned varies from 7 to 15 feet. Most of the crocodiles recorded by Brazaitis and Eberdong (2003) were in the 2 to 10 foot range. They saw no animals larger than 12 feet during their brief survey.

Most of the respondents (78%) have seen crocodiles more than five times in the past year (Table 7). Tables 8 and 9 summarize the responses to questions about whether the crocodiles are seen in different places in different times of the month or year. Detailed responses were not obtained, however 59% of the respondents said that the animals were seen in different areas at both different times

¹ All tables summarizing the interview results are collected at the end of this document, starting on page 9.

² Not all crocodile habitat is indicated on this map. The maps were not used in all of the interviews since many of the older men did not feel comfortable placing areas on the maps.

of the month and year. One respondent noted that only the large individuals swim around Palau, the young tend to stay in one place.

Table 10 summarizes the responses by state about whether the respondents had seen any sick or dead crocodiles, nests, eggs or young in the past year. Young had been seen in all states; nests and eggs were seen in Koror, Melekeok, Ngaraard, Ngchesar, Ngiwal and Peleliu. Sick or dead crocodiles were seen in Koror, Ngaraard, Ngchesar and Peleliu.

Estimates of the total number of crocodiles by state are shown in Table 11. The responses averaged by state range from 10 (Ngaraard and Ngarchelong) to 86 (Peleliu). If all state averages are summed, the total estimated number of crocodiles in Palau is roughly 400. This is a very rough estimate, as some state averages may be high if any of the respondents include large batches of juveniles in their estimate.

Changes over time

Most respondents felt that there are more crocodiles now than 5, 10 or 50 years ago. However, 13% of the respondents also felt that there were more crocodiles in Palau 50 years ago than there are now (see Tables 12, 13 and 14).

Tables 15 and 16 summarize responses to questions about behavioral changes. The most common behavioral changes mentioned were that crocodiles are not afraid of people (33% of responses) or not wild (23% of responses). Many of the men also noted that they were seen closer to shore, docks and ports (15% of

responses). Most responses (44%) regarding the reason for these behavioral changes was that there was less or no hunting. Some responses (19%) indicate that there are too many crocodiles (overpopulation). In addition, 10% of the responses specified that a lack of food has caused the animals to move closer to people and human habitation.

Historical and contemporary uses

Hunting: Tables 17-21 summarize the responses to questions regarding historical and contemporary hunting practices. Crocodile hunting was common in the past in most of the states where interviews were conducted (76%). States where some of the respondents said there was no crocodile hunting in the past were Aimeliik, Angaur and Peleliu. Food (52%), skin (4%) or both food and skin (20%) were the reasons given for crocodile hunting in the past (Table 18).

The majority of respondents (72%) said that crocodile hunting is still occurring. However 15% of the respondents said they did not know if hunting still occurred or not. This contrasts with the 2% who said they did not know if hunting occurred in the past. These responses may indicate that crocodile is not as common as it once was. It may also indicate a reluctance to talk about present hunting practices, especially if the men interviewed believe that laws prohibit hunting.

Hunting methods are listed in Table 20. The most common responses about hunting methods were: spear, net (in Peleliu), and fishing line and hooks. Other men mentioned

rifles, mangrove crab traps (for small crocodiles), *kadiosang* (a large spear) or their bare hands as other hunting tools. Most of the men interviewed said that crocodiles could be hunted at any time, day or night. However 17% said that they are best hunted at night.

Eating: Tables 22-29 summarize responses to questions about historical and contemporary practices and preferences regarding the use of crocodiles for food. Most of the respondents (83%) said that crocodiles were eaten in the past. Only men interviewed in Angaur said they were never eaten. Frequency of crocodile consumption varied: most men said they were eaten when they were caught (46%), and many said they were eaten once in a while or not often.

Most of the men (87%) said that not everyone could eat crocodile. From the responses listed in Table 25, it is clear that the respondents interpreted this to mean that not everyone could eat the meat because of individual taste preferences. They did not interpret this to mean cultural taboos or restrictions on who could or could not eat the meat, as was the case for other animals and fish in Palau. Most of the respondents said that young people, children women or those who were afraid to eat them did not eat crocodiles.

Crocodile consumption still occurs in Palau, but it is not as common as it once was: 67% of the respondents said people still ate crocodile, while 22% said they did not. When asked when the last time crocodile was eaten "around here," 35% of the men replied "last year," 11% said "1 to 2 months ago," 9% said "10 years ago," 7% said "2 years ago," and 7%

said "4-7 years ago." Most of the men interviewed (67%) replied that they themselves had eaten crocodile and 26% said they had not.

Value: The respondents were asked if crocodiles were "valuable" in Palauan culture today (Tables 31-32). The majority of respondents (96%) said "no," no one said "yes," and the rest replied that they did not know. When asked to describe the reasons for their answers, most men explained that crocodile meat is a delicacy that is only eaten once in a while. There are no customs that traditionally used crocodile meat, so they are not seen as being useful or important in the culture as other animals, such as pigs, are.

Other comments

The men were asked to describe any issues associated with crocodiles and for any other comments. Their responses are listed in the boxes on page 7 (the numbers in parentheses are the number of times a particular issue was mentioned). It is clear from the comments that most of the men who were interviewed felt that crocodiles were threatening and dangerous to people, or were competitive for fish and mangrove crabs. They mentioned that some women were afraid to go to their taro patches because of the threat of crocodiles. Some of the fishermen in Airai, Angaur, Melekeok, Ngchesar, Ngiwal and Peleliu felt that there were fishing areas that they could no longer visit since those areas had more crocodiles now. Many of the men believed that the crocodiles should be killed or removed. Some of the men thought that the laws should be amended to allow hunting of

What do you think are the main issues associated with crocodiles today?

- ♦ eradicate, kill all of them (9)
- ♦ remove them from Angaur (3)
- ♦ hunt/kill all the big ones (1)
- ♦ no benefits to people, may harm somebody someday
- ♦ they hunt mangrove crabs, sting rays (5)
- ♦ less crabs because of increasing number of crocodiles (2)
- ♦ increasing in number (9)
- ♦ they break fishing nets and crab traps (2)
- ♦ women are afraid to go to taro patches (1)
- ♦ fishermen afraid to go to certain fishing spots (12) (Airai, Angaur, Melekeok, Ngchesar, Ngiwal, Peleliu)
- ♦ they threaten people
- ♦ hurt people and kills important species
- ♦ conserve, but control wild population (10)
- ♦ capture and place all crocodiles in a preserve
- ♦ conserve for tourism (1)
- ♦ conserve, breed and sell the skins (1)
- ♦ abolish or amend law to allow others to breed and raise them, preserve (1)
- ♦ abolish preservation laws (3)

crocodiles. This is an interesting response, as there are no laws banning the hunting of crocodiles in Palau. There is a national law that ban firearms, that removes one weapon from the arsenal of crocodile hunters. A few of the men thought that the crocodiles should be protected, but controlled in the wild. Some of the men thought all of the wild crocodiles should be placed in a preserve.

Conclusion

As mentioned earlier, crocodiles are not well-liked in Palau. These interviews validate the general feelings Palauans have about these animals. Most of the men who were interviewed for this study know crocodiles because they hunted them at one time. Some of the men know them because they are fishermen or crabbers who are knowledgeable

Do you have any questions or other comments?

- ♦ amend law to allow people to hunt and kill them
- ♦ breed 4 times a year
- ♦ conduct thorough study
- ♦ conserve
- ♦ control numbers; harm people; eat other resources
- ♦ control population
- ♦ control, increasing in number very fast
- ♦ control, numbers are increasing dramatically, allow hunting of certain size
- ♦ don't need them in Angaur, they scare people
- ♦ eradicate
- ♦ establish area for them
- ♦ few sites not fished, control pop growth
- ♦ kill a few so population is sustainably maintained
- ♦ kill a few to control production
- ♦ management plan could help protect crocs
- ♦ mangroves and Ngardok are habitats
- ♦ people scared to fish in feeding areas, kills mangrove crabs
- ♦ remove them so we can catch crabs in swamp and water there
- ♦ study if population is increasing or decreasing
- ♦ Techakl no longer fished
- ♦ too many roaming, Techakl no longer fished
- ♦ why do we conserve them?
- ♦ why do we conserve, we fish in same fishing ground

about the environments they work in. Since they know these animals relatively well, their opinions about crocodiles are not necessarily representative of those of the rest of the people in Palau. However, many of the statements they made are typical of the sentiments generally heard about crocodiles: they are threats to humans, they catch the fish and crabs that people are trying to catch, there are too many of them in Palau, and they are getting closer to humans both in the water and on land.

There have been no incidents in Palau in recent times when a crocodile attacked a person. However, the Palauans fear that this

will happen if the crocodiles are allowed to continue to thrive.

If future studies on the local knowledge of crocodiles are conducted, it would be useful to expand the respondents to include all types of people in Palau, not just the fishermen and hunters. The perspectives of women who collect invertebrates from mangrove areas or who work in taro patches are especially lacking from this study. In order to design any meaningful conservation strategy for the Palauan saltwater crocodile population, it would be useful to find out the range of perceptions regarding the threat posed by the crocodiles, and what peoples' beliefs are about the frequency of actual human-crocodile confrontations.

The saltwater crocodiles of Palau are a unique and rare species. They are dependent upon healthy coastal mangroves and a supply of fish and crabs. Populations of crocodiles can be maintained in protected areas where fishing is not allowed, such as areas around Lake Ngardok or Ngaremeduu Bay, with little or no threat to people.

Acknowledgements

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Interview results summary tables

	<i>number</i>	<i>%</i>
yes	44	96
no	2	4
Total	46	

	<i>avg number</i>
Aimeliik (2)	9
Airai (3)	9
Angaur (8)	13
Koror (5)	6
Melekeok (5)	21
Ngaraard (4)	10
Ngarchelong (2)	10
Ngardmau (1)	20
Ngaremlengui (1)	20
Ngatpang (2)	15
Ngchesar (4)	13
Ngiwal (3)	11
Peleliu (6)	32
Total	189

	<i>number</i>	<i>%</i>
night	10	20
day	8	16
all times	12	25
middle tide	2	4
low tide	1	2
summer	2	4
last week	1	2
last month	4	8
2 months ago	1	2
last year	4	8
no answer	4	8
Total (multiple answers)	49	

	<i>number</i>	<i>%</i>
territorial	7	15
migrate	11	24
lg migrate, yg territorial	1	2
long time	7	15
very long time	2	4
10 years	1	2
since 1970	1	2
since 1980	1	2
stay 2-3 months	1	2
6 months	1	2
all year	10	22
don't know	2	4
no answer	1	2
Total	46	

	<i>avg</i>
Aimeliik (2)	10
Airai (3)	8
Angaur (8)	8
Koror (5)	7
Melekeok (5)	13
Ngaraard (4)	15
Ngarchelong (2)	10
Ngardmau (1)	10
Ngaremlengui (1)	12
Ngatpang (2)	8
Ngchesar (4)	10
Ngiwal (3)	10
Peleliu (6)	12
Overall average	10

Table 7. How often have you seen them in the past year?		
	<i>number</i>	<i>%</i>
1 time	0	0
2 times	2	4
2-5 times	5	11
> 5 times	36	78
don't know	0	0
no answer	3	7
Total	46	

Table 8. Are they in different areas at different times of the month?		
	<i>number</i>	<i>%</i>
yes	27	59
no	13	28
territorial	1	2
lg ones swim around Palau	1	2
don't know	4	9
no answer	0	0
Total	46	

Table 9. Are they in different areas at different times of the year?		
	<i>number</i>	<i>%</i>
yes	23	50
no	13	28
depends on food	1	2
move in swamp	1	2
lg ones swim around Palau	1	2
don't know	5	11
no answer	2	4
Total	46	

Table 10. Have you seen any...				
	<i>sick or dead</i>	<i>nests (past yr)</i>	<i>eggs (past yr)</i>	<i>young (past yr)</i>
Aimeliik				x
Airai				x
Angaur				x
Koror	x	x	x	x
Melekeok		x	x	x
Ngaraard	x	x	x	x
Ngarchelong				x
Ngardmau				x
Ngaremlengui				x
Ngatpang				x
Ngchesar	x	x	x	x
Ngiwal		x	x	x
Peleliu	x	x	x	x
Total # of states	4	6	6	13

Table 11. How many <i>ius</i> do you think live around here?	
	<i>avg number</i>
Aimeliik (2)	55
Airai (2)	15
Angaur (6)	43
Koror (4)	28
Melekeok (5)	46
Ngaraard (3)	10
Ngarchelong (2)	10
Ngardmau (1)	20
Ngaremlengui (1)	20
Ngatpang (2)	15
Ngchesar (4)	18
Ngiwal (3)	31
Peleliu (5)	86
Total of all averages	397

Table 12. Compared to 5 years ago, there are...		
	<i>number</i>	<i>%</i>
more	43	93
less	2	4
about the same	0	0
don't know	1	2
no answer	0	0
Total	46	

Table 13. Compared to 10 years ago, there are...		
	<i>number</i>	<i>%</i>
more	43	93
less	2	4
about the same	0	0
don't know	1	2
no answer	0	0
Total	46	

Table 14. Compared to 50 years ago, there are...		
	<i>number</i>	<i>%</i>
more	39	85
less	6	13
about the same	0	0
don't know	1	2
no answer	0	0
Total	46	

Table 15. Have you noticed any changes in any ways <i>ius</i> behave?		
	<i>number</i>	<i>%</i>
not afraid of people, brave	16	33
moving closer to shore, dock, port	7	15
tame, not wild	11	23
wild, afraid of people	4	8
young are tame; big ones are wild	1	2
stay in one place all the time	2	4
people not afraid of them	1	2
no changes, same	5	10
don't know	1	2
no answer	0	0
Total (multiple answers)	48	

Table 16. Why do you think these changes have happened?		
	<i>number</i>	<i>%</i>
lack of food	5	10
boat use	1	2
less or no poaching, hunting	23	44
overpopulated, too many	10	19
afraid of people	1	2
young ones don't know people; big ones try to bite	1	2
don't know	2	4
no answer	9	17
Total (multiple answers)	52	

Table 17. Did people from this area hunt <i>ius</i> in the past?		
	<i>number</i>	<i>%</i>
yes	35	76
no	10	22
don't know	1	2
no answer	0	0
Total	46	

Table 19. Are <i>ius</i> still being hunted around here?		
	<i>number</i>	<i>%</i>
yes	33	72
no	5	11
don't know	7	15
no answer	1	2
Total	46	

Table 18. Why were they hunted?		
	<i>number</i>	<i>%</i>
food	24	52
skin	2	4
both	9	20
hated	1	2
poached	1	2
never hunted	1	2
don't know	0	0
no answer	8	17
Total	46	

Table 20. If yes, how are they hunted now?		
	<i>number</i>	<i>%</i>
spear	34	51
kadiosang	2	3
speargun	2	3
machete	1	2
bare hands	2	3
net (Peleliu)	5	7
harpoon	1	2
trap (chemang)	2	3
fishing line, hooks	4	6
rifle	2	3
don't know	0	0
no answer	11	17
Total (multiple answers)	66	

Table 21. When are they hunted now?		
	<i>number</i>	<i>%</i>
anytime	8	17
day or night	11	24
night	8	17
day	1	2
when seen	2	4
not hunted now	2	4
don't know	3	7
no answer	11	24
Total	46	

Table 22. Did people from this area eat <i>ius</i> in the past?		
	<i>number</i>	<i>%</i>
yes	38	83
no (Angaur)	7	15
don't know	0	0
no answer	1	2
Total	46	

Table 23. How often was <i>ius</i> eaten?		
	<i>number</i>	<i>%</i>
when caught	21	46
2-3 times/yr	3	6
1/yr or less	4	9
not often	4	9
once in awhile	4	9
not a delicacy	1	2
don't know	2	4
no answer	7	15
Total	46	

Table 24. Could everyone eat <i>ius</i> ?		
	<i>number</i>	<i>%</i>
yes	3	7
no	40	87
don't know	2	4
no answer	1	2
Total	46	

Table 25. If no, who could not eat <i>ius</i> ?		
	<i>number</i>	<i>%</i>
varied	9	17
women	10	18
young people and children	13	24
elderly	1	2
some are afraid to eat	5	9
no one ate them	1	2
only young people eat them	2	4
people think they aren't good to eat	2	4
they're new, never tasted them	1	2
don't know	2	4
no answer	8	15
Total (multiple answers)	54	

Table 26. <i>Ius</i> were eaten...		
	<i>number</i>	<i>%</i>
anytime	35	76
when caught	4	9
never eaten	1	2
skinned	1	2
don't know	3	7
no answer	2	4
Total	46	

Table 27. Do people still eat <i>ijs</i> around here?		
	<i>number</i>	<i>%</i>
yes	31	67
no	10	22
don't know	4	9
no answer	1	2
Total	46	

Table 28. When was the last time that <i>ijs</i> was eaten around here?		
	<i>number</i>	<i>%</i>
1-2 months ago	5	11
3 months ago	1	2
6 months ago	2	4
last year	16	35
2 yrs ago	3	7
few yrs ago	1	2
4-7 yrs ago	3	7
10 yrs ago	4	9
> 10 yrs ago (1970s)	1	2
never seen it eaten	1	2
don't know	4	9
no answer	5	11
Total	46	

Table 29. Have you ever eaten <i>ijs</i> ?		
	<i>number</i>	<i>%</i>
yes	31	67
no	12	26
don't know	0	0
no answer	3	7
Total	46	

Table 30. Are there certain times of the year that <i>ius</i> are easier or harder to find?		
	<i>number</i>	<i>%</i>
yes	3	7
no	30	65
don't know	9	19
no answer	4	9
Total	46	

- ◆ depends on tide and time
- ◆ easier to catch during breeding season (2)
- ◆ same all year
- ◆ easy to find at night (2)

Table 31. Do you think <i>ius</i> are valuable in the Palauan culture today?		
	<i>number</i>	<i>%</i>
yes	0	0
no	44	96
don't know	2	4
o answer	0	0
Total	46	

Table 32. Explanation of value		
	<i>number</i>	<i>%</i>
not useful or important in the culture (like pigs)	13	28
only a delicacy	23	50
difficult to use	1	2
not everyone eats them	1	2
hunted for food	1	2
don't know	0	0
no answer	7	15
Total	46	

Questionnaire

Local knowledge about Crocodiles (*ius*)

(1) Name: _____

(2) Date: _____

(3) Hamlet: _____

(4) State: _____

Distribution, movements, habits and general behavior

(5) Have you seen *ius* near here in the past year? Yes No

(6) Where have you seen them? (mark areas on map) _____

(7) How many did you see? _____

(8) When did you see them? (month or season and time of day) _____

(9) How long do they stay around here? _____

(10) How big are they? _____

(11) How often have you seen them in the past year?
 1 time 2 times more than 2 times more than 5 times

(12) Are they in different areas at different times of the month? _____

(13) Are they in different areas at different times of the year? _____

(14) Have you ever seen any sick or dead *ius* around here? Yes No

(15) Have you seen any crocodile nests around here in the past year? Yes No

(16) Have you seen any crocodile eggs near here in the past year? Yes No

(17) Have you seen any young / juvenile crocodiles around here in the past year? Yes No

(18) How many *ius* do you think live around here? _____

Changes over time

Are there more or less *ius* around here now

(19) compared to 5 years ago more less about the same

(20) compared to 10 years ago more less about the same

(21) compared to 50 years ago more less about the same

(22) Have you noticed any changes in any ways *ius* behave? Please describe these changes. _____

(23) Why do you think these changes have happened? _____

Historical and contemporary uses

(24) Did people from this area hunt *ius* in the past? Yes No Don't know

(25) Why were they hunted? for food for skin Other _____

(26) Did people from this area eat *ius* in the past? Yes No Don't know

(27) How often was *ius* eaten? _____

(28) Could everyone eat *ius*? Yes No Don't know

(29) If no, who could not eat *ius*? _____

(30) *Ius* were eaten at any time on special occasions Other _____

(31) If special occasion, what was the occasion? _____

(32) Do people still eat *ius* around here? Yes No Don't know

(33) When was the last time that *ius* was eaten around here? _____

(34) Have you ever eaten *ius*? Yes No

(35) Are *ius* still being hunted around here? Yes No Don't know

(36) If yes, how are they hunted now? _____

(37) When are they hunted now? _____

(38) Are there certain times of the year that *ius* are easier or harder to find? Please explain.

(39) Do you think *ius* are valuable in the Palauan culture today? Yes No Don't know

(40) Please explain. _____

(41) What do you think are the main issues associated with crocodiles today? _____

(42) Do you have any questions or other comments? _____

Thank you for answering our questions.