**An Indigenous perspective on the conservation of an insular endemic: the prehensile-tailed skink *Corucia zebrata* on the Solomon Islands**

Patrick G. Pikacha, David Boseto, Ikuo Tigulu, Hensllyn Boseto, Josef Hurutarao and Tyrone H. Lavery

Supplementary Table 1 Showing study sites where the questionnaires were filled, with Dunde (^) village (New Georgia) the most populated (4000), and Kijabelo (\*) village (Vangunu), least populated (4). Maraone (#) village (Makira), was geographically the most remote village in this study. The occupants of Maraone village were entirely dependent on natural resources (including hunting of prehensile-tailed skinks *Corucia zebrata*).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Island** | **Village** | **Location** | **Elevation (m)** | **Range of village population** |
| Choiseul | Panarui, Sasamunqa | Coastal  | 2-10 | 800-1000 |
| Guadalcanal | Kongulai | Inland | 200 | 200 |
|  | Binu | Lowland | 10 | 500 |
| Isabel | Suva | Coastal | 10 | 300 |
|  | Tithiro, Kolosori, Bagovu | Lowland  | 10-20 | 300 |
|  | Gurena, Garanga, Koregu, Bana | Inland | 20-30 | 20-300 |
| Makira | Tarosi | Coastal | 2 | 10 |
| Hunamu, Naara, Wapunarongo, Maraone#, Hauta | Inland | 50-900 | 10-130 |
| Malaita | Araro'a | Lowland | 20 | 50-60 |
|  | Paunanu'u, Raruka, Hura'i, Toihioro | Inland | 20-30 | 20-100 |
| New Georgia | Dunde^, Gharighari, Lagoro, Narareth, Nusa Banga, Vivila | Coastal | 1-10 | 10-4000 |
|  | Baeroko, Baeveke, Laehena, Ziater | Lowland | 5-20 | 15-500 |
| Ngella | Soso | Coastal | 2 | 100 |
| Nggatokae | Bili, Buinikalo, Pejuku, Sera Iriri, Sobiro | Coastal | 1-20 | 100-1000 |
| Rendova | Baniata, Havila, Lokuru | Coastal | 1-10 | 300-2000 |
| Savo | Mavulu, Pokilo | Coastal | 2 | 600-800 |
| Ulawa | Arona, Jerumae, Moli, Mwarada, Rongohote | Coastal | 2-5 | 25-800 |
|  | Haraina | Inland | 20 | 50 |
| Vangunu | Chakope, Cheke, Chemoho, Kijabelo\*, Patutiva, Tobulu, Zaira | Coastal | 2-10 | 4-500 |

Supplementary Material 1 Questionnaire for the purpose of gathering ethnobiological data on the present status of the nearly threatened and heavily traded Solomon Islands prehensile-tailed skink *Corucia zebrata.*

*Ensure that you explain in as clear and concise a manner as possible the purpose of the interview and the study, which is to gain an understanding of the ethnobiology and traditional ecological knowledge of the endemic Solomon prehensile-tailed skink. Additionally, the goal of these interview questions is to gauge the status of this reptile from an indigenous perspective, and explore and secure traditional observations and collective experiences from a wide range of Indigenous communities and islands throughout the reptiles’ natural distribution. Always request verbal consent before beginning the interview.*

**1. INFORMANT DATA**

**Site Details**

1. Island: \_\_\_\_\_\_\_\_\_\_\_\_\_ 2. Village: \_\_\_\_\_\_\_\_\_\_\_\_ 3. Village location: Coastal / inland / in between

4. Approx. village population: \_\_\_\_\_\_\_\_\_

**Interviewee details**

5. Sex: \_\_\_\_\_\_ 6. Age: >20, 20-30, 31-40, 41-50, 50-60, 61< 7. Occupation: \_\_\_\_\_\_\_

8. How often do you go to the forest to garden or hunt in a year?

**2. KNOWLEDGE OF FOREST**

**Hunters’ or respondents’ perspective on environment and forest**

(*Grasp local perspective on how their surroundings has changed and what they think is causing this change*)

9. How often do you spend in the forest?

10. For what reason do you enter the forest?

11. Have you seen the forest change over your lifetime?

12. In what way has the forest changed?

13. Do you think this change (if there is), has been for the better or worse for you and your community?

14. Are there any specific traditional practices that are dying out as a result of this change?

**3. POPULATION TREND**

**Solomon prehensile-tailed skink occurrence**

(*Grasp local perspective on presence and absence of skink*)

15. When was the last time you saw a Solomon monkey-tailed skink?

16. What do you do when you see the Solomon monkey-tailed skink?

a. Kill and eat it

b. Kill it for no reason

c. Watch it and let it go

17. What is your reason for you answer in Question 16?

18. What do think the Solomon monkey-tailed skink is becoming rare, or still abundant?

19. What do you think is the main threat?

Supplementary Material 1 (*Cont.*)

**4. HABITAT AND FEEDING**

**Solomon prehensile-tailed skink habitat**

20. In what kind of forest did you see the prehensile-tailed skink?

a. Montane

b. Hill or ridge

c. Lowland

d. Coastal forest

21. In what kind of vegetation was the skink found (‘abalolo’ [strangler figs], vines, Epiprenum vines, etc. Be specific)

22. Did you see this skink in disturbed forest, undisturbed forest, secondary forest (old overgrown gardens, etc. Be specific where you saw it)

**Solomon prehensile-tailed skink food sources**

23. What do you know of this animal’s food source, what does it eat (be specific)?

24. Is the food source abundant? Depleting?

25. Do you think this is impacting the abundance of this animal?

**5. CONSERVATION APPROACHES**

**Solomon prehensile-tailed skink totem stories**

26. Does this animal carry any traditional importance in your culture?

27. Has it ever been traditionally protected? If so, how was it?

28. Has the forest been traditionally protected (e.g., tabu sites established)?

**Solomon prehensile-tailed skink conservation**

29. If you had a chance to protect this animal how would you do it?

30. Do you know of anyone who has kept and successfully bred this animal?

**SEMI – STRUCTURED INTERVIEW QUESTIONS (TOK STORI – STORY-TELLING)**

*Prompt questions*

1. Can you tell me if you hunted as a child with your father or mother?

2. Was the Prehensile-tail skink part of your targeted prey?

3. How has the forest changed over your life time? Can you share some specific examples?

4. Are the Prehensile-tailed skinks culturally significant or mentioned in any oral tradition stories?

Supplementary Table 2 Data from 12 islands of the Solomon Islands, showing the total number of interviewees per island, Christian sects of respondents, mean population of villages in which people were interviewed, mean number of days respondents spent in forest per year, % of respondents that hunt, and % of respondents that perceive the population trend of prehensile-tailed skink *Corucia zebrata* as in decline or stable, or were unsure about the population trend.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Island (number of respondents) | Christian sects of respondents | Mean ± SD population of villages interviewed | Mean ± SD number of days spent in forest per year | Reasons for visiting the forest | Respondents that perceive skink in decline (%) | Respondents that perceive skink stable (%) | Respondents unsure (%) |
| Tourism or education (%) | Hunt (%) | Cutting trees & milling timber (%) | Gardening (%) | Harvesting of bush material (%) |
| Choiseul(n=18) | United Church (100%) | 911$\pm $102 | 29$\pm $24 | 6 | 11 | 0 | 39 | 44 | 72 | 28 | 0 |
| Guadalcanal(n=20) | Catholic (50%), South Seas Evangelical (50%) | 350 $\pm $153 | 87$\pm $92 | 0 | 15 | 50 | 35 | 0 | 0 | 95 | 5 |
| Isabel(n=8) | Anglican (100%) | 253$\pm $100 | 152$\pm $91 | 0 | 38 | 0 | 38 | 24 | 50 | 50 | 0 |
| Makira(n=10) | Anglican (60%), Catholic (40%) | 57$\pm $42 | 88$\pm $83 | 10 | 80 | 0 | 0 | 10 | 70 | 20 | 10 |
| Malaita(n=10) | South Seas Evangelical (100%) | 68$\pm $29 | 71$\pm $69 | 10 | 10 | 0 | 70 | 10 | 70 | 30 | 0 |
| New Georgia(n=26) | United Church (100%) | 317$\pm $779 | 164$\pm $63 | 7 | 4 | 0 | 81 | 8 | 8 | 92 | 0 |

Supplementary Table 2 (*Cont.*)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Island (number of respondents) | Christian sects of respondents | Mean ± SD population of villages interviewed | Mean ± SD number of days spent in forest per year | Reasons for visiting the forest | Respondents that perceive skink in decline (%) | Respondents that perceive skink stable (%) | Respondents unsure (%) |
| Tourism or education (%) | Hunt (%) | Cutting trees & milling timber (%) | Gardening (%) | Harvesting of bush material (%) |
| Ngella(n=4) | Anglican(100%) | 98$\pm $1.3 | 66$\pm $15 | 0 | 0 | 0 | 100 | 0 | 0 | 25 | 75 |
| Nggatokae(n=10) | Seventh-Day Adventist(100%) | 300$\pm $254 | 125$\pm $61 | 0 | 0 | 10 | 80 | 10 | 30 | 70 | 0 |
| Rendova(n=9) | United Church(100%) | 1056$\pm $896 | 171$\pm $72 | 0 | 0 | 0 | 78 | 22 | 44 | 56 | 0 |
| Savo(n=9) | Anglican(100%) | 778$\pm $67 | 65$\pm $67 | 0 | 11 | 22 | 67 | 0 | 22 | 78 | 0 |
| Ulawa(n=11) | Anglican(100%) | 223$\pm $300 | 175$\pm $78 | 0 | 0 | 9 | 91 | 0 | 27 | 55 | 18 |
| Vangunu(n=11) | Seventh-Day Adventist (45%),United Church (55%) | 206$\pm $235 | 183$\pm $74 | 0 | 9 | 27 | 55 | 9 | 73 | 27 | 0 |
|  |  |  | Average summary | 3$\pm $4 | 15$\pm $23 | 10$\pm $16 | 61$\pm $29 | 11$\pm $13 | 39$\pm $28 | 52$\pm $27 | 9$\pm $22 |

Supplementary Table 3 Responses to the question ‘In what forest type or habitats have you encountered prehensile-tailed skinks?’ (including microhabitat and vegetation characteristics, and state of the forest according to respondents; reported as % of respondents).

|  |  |  |  |
| --- | --- | --- | --- |
| Forest type | % of respondents  |  | State of forest (% of respondents) |
| Microhabitat/vegetation | Undisturbed | Disturbed | Undisturbed/disturbed  | Unsure |
| Montane (MO) | 5 | Strangler figs, vines, Island lychee (*Pometia pinnata*) | 71 | 29 | 0 | 0 |
| Hill/ridge (HR) | 16 | *Epiprenum* vines, Sago palm (*Metroxylon* sp.), vines, Island lychee(*Pometia pinnata*), New Guinea teak (*Vitex cofassus*), strangler figs (*Ficuss* spp), trees covered by vines, wild nut trees (*Canarium* sp.) | 78 | 13 | 9 | 0 |
| Lowland (LL) | 21 | Breadfruit tree, Sago palm (*Metroxylon* sp.), Bamboos, fruiting trees, trees covered in vines, shrubs, New Guinea teak (*Vitex cofassus*), strangler figs (*Ficuss* spp.), Epiprenum vines, vines, mangroves, Island lychee (*Pometia pinnata*)  | 47 | 30 | 13 | 10 |
| Coastal (CO) | 9 | Vines, Island lychee (*Pometia pinnata*), New Guinea teak (*Vitex cofassus*), ‘Proposis’, Epiprenum vines, vines ahuto, mamaa (Ulawa language), Sago palm (*Metroxylon* spp.), leaves of ‘tiva nono’ tree (Marovo language) | 62 | 38 | 0 | 0 |
| Coastal, lowland (CO, LL) | 3 | Strangler figs (*Ficus* sp.), vines, Sago palm (*Metroxylon* sp.) | 40 | 60 | 0 | 0 |
| Hill/ridge, lowland (HR, LL) | 7 | Sago palm (*Metroxylon* sp.), Brown terminalia (*Terminalia brassii*), vines, Strangler figs (*Ficus* sp.) | 25 | 33 | 42 | 0 |

Supplementary Table 3 (*Cont.*)

|  |  |  |  |
| --- | --- | --- | --- |
| Forest type | % of respondents  | Microhabitat/vegetation | State of forest (% of respondents) |
| Undisturbed | Disturbed | Undisturbed/disturbed  | Unsure |
| Coastal, lowland, hill/ridge (HR, LL, CO) | 13 | Brown terminalia (*Terminalia brassii*), Sago palm (*Metroxylon* sp.), strangler figs (*Ficus* sp.), large trees covered by vines, New Guinea teak (*Vitex cofassus*), vines | 14 | 15 | 71 | 0 |
| Montane, hill/ridge (MO, HR) | 11 | Strangler figs (*Ficus* sp.), wild ferns, salts, Island lychee (*Pometia pinnata*), Sago palm (*Metroxylon* sp.), Strangler fig (*Ficus* sp.), vines, hollow trees | 72 | 0 | 17 | 11 |
| Lowland, hill/ridge, montane (MO, HR, LL) | 12 | Small bamboo, *Metroxylon* spp., strangler figs (*Ficus* spp.), vines, trees of large girth with large holes | 47 | 0 | 37 | 16 |
| Coastal, Lowland, hill/ridge, montane, CO, LL, HR, MO) | 3 | Strangler fig (*Ficus* sp.), | 20 | 20 | 40 | 0 |