

## **Amphibians and Reptiles of Abasig Matogdon Mananap Natural Biotic Area: The Herpetofauna of San Vicente**

Cyrus Job P. DELA CRUZ & Alejandro D. MARANAN  
[cyrusjob.delacruz@bicol-u.edu.ph](mailto:cyrusjob.delacruz@bicol-u.edu.ph) (Dela Cruz), [alx\\_maranan@yahoo.com](mailto:alx_maranan@yahoo.com) (Maranan)

---

**Observers:** Cyrus Job P. Dela Cruz, Alejandro D. Maranan.

**Photographs by:** Cyrus Job P. Dela Cruz, Alejandro D. Maranan.

**Subjects identified by:** Cyrus Job P. Dela Cruz.

**Location:** Abasig Matogdon Mananap Natural Biotic Area (San Vicente), Camarines Norte, Bicol Peninsula, Philippines.

**Elevation:** 42 meters

**Habitat:** Secondary forest and waterfalls with rocky to sandy substrate (Figs. 1 and 2).

**Date:** 02-03 August 2017, 07:00 to 10:00 hrs.

### **Identity of subjects and descriptions of records:**

- 1) Rough-backed Forest Frog, *Platymantis corrugatus* (Amphibia: Anura: Ceratrobatrachidae), two male individuals were observed calling on a tree trunk and from forest leaf litter (Fig. 3).
- 2) Common Forest Frog, *Platymantis dorsalis* (Amphibia: Anura: Ceratrobatrachidae), five individuals with varying morphs were observed calling from stream banks, forest leaf litter, and forest floor. (Figs 4, 5, 6, 7, 8).
- 3) Woodworth's Frog, *Limnonectes woodworthi* (Amphibia: Anura: Dicroglossidae), two individuals were observed resting on a rock near a stream (Fig. 9).
- 4) Common Puddle Frog, *Occidozyga laevis* (Amphibia: Anura: Dicroglossidae), three mature individuals with varying morphs and 4 tadpoles were observed in a puddle of water (Figs 10, 11, 12).
- 5) Luzon Frog, *Sanguirana luzonensis* (Amphibia: Anura: Ranidae), two individuals were recorded on a rock near waterfalls (Fig. 13).
- 6) Philippine Sailfin Lizard, *Hydrosaurus pustulatus* (Reptilia: Squamata: Agamidae), encountered in a rocky area near a stream, no photo.
- 7) Enteng's Monitor Lizard, *Varanus dalubhasa* (Reptilia: Squamata: Varanidae), encountered in a rocky area near a stream, no photo.
- 8) Asian Vine Snake, *Ahaetulla prasina preocularis* (Reptilia: Squamata: Colubridae), one individual was recorded resting on a fern (Fig. 14).
- 9) Northern Triangle-spotted Snake, *Cyclocorus lineatus* (Reptilia: Squamata: Colubridae), one roadkill specimen was encountered along a forest trail, no photo.
- 10) Wolf Snake, *Lycodon muelleri* (Reptilia: Squamata: Colubridae), one individual was recorded amongst mossy rocks at night (Fig. 15).
- 11) Philippine Cobra, *Naja philippinensis* (Reptilia: Squamata: Elapidae), one mature individual was encountered on the forest floor (Fig. 16).
- 12) Banded Philippine Burrowing Snake, *Oxyrhabdium leporinum* (Reptilia: Squamata: Lamprophiidae), one individual was recorded, no photo.
- 13) Dark-spotted Mock Viper, *Psammodynastes pulverulentus* (Reptilia: Squamata: Lamprophiidae), one individual was recorded moving on top of a dead log (Fig. 17).
- 14) Reticulated python, *Malayopython reticulatus* (Reptilia: Squamata: Pythonidae), individuals were observed amongst tree branches and on the forest floor, no photo.
- 15) Philippine Pit Viper, *Trimeresurus flavomaculatus* (Reptilia: Squamata: Viperidae), three individuals with varying morphs were seen resting on the forest floor and near waterfalls (Figs 18, 19, 20).



Fig. 1. Secondary forest of San Vicente



Fig. 2. Mananap Falls



Fig. 3. *Platymantis corrugatus*



Fig. 4. *Platymantis dorsalis* (morph)



Fig. 5. *Platymantis dorsalis* (morph)



Fig. 6. *Platymantis dorsalis* (morph)



Fig. 7. *Platymantis dorsalis* (morph)





Fig. 8. *Platymantis dorsalis* (morph)



Fig. 9. *Limnonectes woodworthi*



Fig. 10. *Occidozyga laevis* (morph)



Fig. 11. *Occidozyga laevis* (morph)



Fig. 12. *Occidozyga laevis* (morph)



Fig. 13. *Sanguirana luzonensis*



Fig. 14. *Ahaetulla prasina preocularis*



Fig. 15. *Lycodon muelleri*





Fig. 16. *Naja philippinensis*



Fig. 17. *Psammodynastes pulverulentus*



Fig. 18. *Trimeresurus flavomaculatus* (morph)



Fig. 19. *Trimeresurus flavomaculatus* (morph)



Fig. 20. *Trimeresurus flavomaculatus* (morph)

Images 1-13, 18 © Cyrus Job P. Dela Cruz.  
 Images 14-17, 19, 20 © Alejandro D. Maranan.

**Remarks:** Abasig Matogdon Mananap Natural Biotic Area, located in the Province of Camarines Norte, is a protected area approved on May 31, 2000 under Presidential Proclamation No. 318 as one of the National Integrated Protected Areas System (NIPAS) and categorized as Natural Biotic Area, an area set aside to allow the way of life of societies living in harmony with the environment to adapt to modern technology at their own pace. The PA-AMMNBA has an area of 5,420.12 hectares, and covers the municipalities of San Lorenzo Ruiz, San Vicente and Labo.

The terrain is mountainous, rolling and rugged and is composed mostly of moderately to steeply sloping terrain. The highest slope is measured as 85%, while the lowest is 5% with an average slope ranging from 40% to 45%. Three soil types are identified in the area: Louisiana Clay Loam (upper elevation), Aluminous Clay Loam (lower portion) and Mountain Soil (distributed in the forest reservation of the protected area). Mostly, the AMMNBA's land cover is comprises closed forest.

The month of August, during which this survey was undertaken, has a monthly rainfall of around 280 mm, and lies mid-way between the driest month of April, and the wettest months, which are typically November and December. Mean monthly relative humidity exceeds 80%.

This study is the first documentation of herpetofauna in PA-AMMNBA particularly in the San Vicente area. A total of 15 species representing 10 families (Ceratrobatrachidae, Dicroglossidae, Ranidae, Agamidae, Varanidae, Colubridae, Elapidae, Lamprophiidae, Pythonidae, Viperidae) were documented in the area.

Eight Philippine endemics (*P. corrugatus*, *P. dorsalis*, *L. woodworthi*, *H. pustulatus*, *C. lineatus*, *N. philippinensis* and *T. flavomaculatus*), four Luzon island endemics (*S. luzonensis*, *V. dalubhasa*, *L. muelleri* and *O. leporinum*), and four Southeast Asian species (*O. laevis*, *A. prasina*, *P. pulverulentus* and *M. reticulatus*) were recorded thriving in the site.

*Platymantis corrugatus* is an endemic species and is distributed in major islands of the Philippines with the exception of Palawan PAIC and Sulu Archipelago islands (Diesmos et al. 2015). It is identified by its (i) prominent black facial “mask” and (ii) its distinctive “quack.. quack..” advertisement call (Brown et al. 2012). Individuals were observed under thick vegetation and amongst forest leaf litter. The species conservation status (IUCN) is “Least Concern”.

*Platymantis dorsalis* is a medium-sized, polymorphic, widespread, endemic frog species which occurs on Luzon Island and Western Visayas (Diesmos et al. 2015). This species was identified by its (i) pure-tone frequency sweep advertisement call, (ii) dorsal skin rugosity, (iii) some morph had prominent dorsal lines and (iv) ground forest microhabitat preference. The recognition of numerous cryptic species in the *P. dorsalis* complex suggests that morphological data alone may not be sufficient for identification. Further molecular and advertisement call analysis can resolve complex taxonomic issues about this group. The species conservation status (IUCN) is “Least Concern”.

*Limnonectes woodworthi* is an endemic frog species in the Philippines and has been recorded occurring throughout all Luzon and on nearby Islands (Diesmos et al. 2015). This species lives sympatrically with *L. macrocephalus*. It can be differentiated from the latter species by its (i) smaller size, (ii) dorsal and dorsolateral folds, and (iii) dark tympanic region (McLeod et al. 2011). The species conservation status (IUCN) is “Least Concern”.

*Occidozyga laevis* is a widespread species throughout the islands of Southeast Asia (Brown et al 2013). This species was identified by its (i) stout body with small head, (ii) interorbital distance equal to or less than the width of the eyelid, (iii) dorsal surfaces corrugated with rounded protrusions and (iv) muscular legs with fully webbed toes. No taxonomic studies have targeted this variable taxon. Although Diesmos and Brown (op. cit.) observed noteworthy body size and call variations in the Philippines. The species conservation status (IUCN) is “Least Concern”.

*Sanguirana luzonensis* is a common and widespread Luzon island group endemic, with a wide tolerance for a variety of habitats (Brown et al 2012). Identified by its (i) absence of dorsal asperities, (ii) tympanum not translucent, (iii) snout pointed, (iv) dorsolateral ridge indistinct and (v) stream microhabitat preference. This species is classified as “Least Concern” (Brown et al 2012).

*Hydrosaurus pustulatus* is an endemic species of sailfin lizard which is known to occur on all major and small isolated Philippine islands except Palawan (Siler et al 2012). The species conservation status (IUCN) is “Vulnerable”.

*Varanus dalubhasa* is a cryptic species of monitor lizard found throughout the Bicol peninsula faunal sub-region including genetically confirmed specimen identification from Polilo and Catanduanes islands (Welton et al 2014). Identified because of its (i) presence of small, dark speckling in the gular region and faint anterior transverse bands and (ii) allopatric distribution in the Bicol sub-region. The species does not currently appear in the IUCN Red List.

*Ahaetulla prasina preocularis* is widely distributed throughout the Philippines (Leviton 1967). This subspecies was identified by its (i) elongated snout, (ii) vine-like resemblance because of its extremely slender body and (iii) bright green color. The species conservation status (IUCN) is “Least Concern”.

*Cyclocorus lineatus* is an endemic snake species commonly encountered beneath rocks, loose soil and logs (Brown et al 2013). This species was identified by its ventral surface with many dark triangularly-shaped blotches. One roadkill specimen was encountered along a forest trail.

*Lycodon muelleri* has been recorded throughout Luzon Island (Siler et al 2011). In a recent phylogenetic study of Southeast Asian wolf snakes, a deep genetic divergence was observed between populations of *L. muelleri* from northern and central Luzon and populations sampled on the Bicol Peninsula in southeast Luzon (Siler et al. 2013). This species was identified by its (i) crossbands on the body and (ii) reticulum pattern of white to dark brown background that is distinct on the head.

*Naja philippinensis* is an endemic species of elapid in the Philippines, occurring throughout disturbed and forested low elevation habitats of the Luzon, Mindoro, and Visayan faunal regions (Brown et al 2012). It was identified by its (i) light brown to olive brown dorsal colouration without any distinctive dark bands or other markings anteriorly and (ii) it exhibited hooding. The conservation status of this species (IUCN) is “Near Threatened” due to persistent persecution by humans (Brown et al 2012).

*Oxyrhabdium leporinum* is a common Luzon faunal region endemic species (Brown et al 2013). The conservation status (IUCN) of this species is “Least Concern”.

*Psammodynastes pulverulentus* is a widespread Southeast Asian “mock” viper (Brown et al 2012). This species was identified by its (i) “viper-like” appearance, (ii) slender body and (iii) flattened head which is distinct from the neck. The conservation status of this species (IUCN) is “Least Concern” (Brown et al 2012).

*Malayopython reticulatus* was identified for exhibiting typical head shape and patterning for the species. The population status of this species in the Philippines is unclear, and an assessment is needed to determine its conservation status and required level of protection.

*Trimeresurus flavomaculatus* is an endemic widely distributed species of pit viper in the Philippines. This species has been noted previously to be highly polymorphic in coloration across its distribution (Siler et al., 2011). Several morphs such as green with red patches, green with white patches, and brown-red and green mixtures with black patches were observed during the visit.

#### References:

- Brown RM, Oliveros CH, Siler CD, Fernandez JB, Welton LJ, Buenavente PAC, Diesmos MLL, Diesmos AC. (2012). *Amphibians and Reptiles of Luzon Island (Philippines)*, VII: Herpetofauna of Ilocos Norte Province, Northern Cordillera Mountain Range. *Check List* 8(3):469-490
- Brown, RM, Siler CD, Oliveros, CH, Welton LJ, Rock A, Swab J, Van Weerd M, Van Beijnen J, Jose E, Rodriguez D, Jose E, & Diesmos AC. (2013). *Amphibians and Reptiles of Luzon Island (Philippines)*, VIII: the herpetofauna of Cagayan and Isabela Provinces, northern Sierra Madre Mountain Range. *Zookeys* 266:1-120.
- Diesmos AC, Watters J, Huron N, Davis D, Alcalá A, Crombie R, Afuang L, Gee-Das G, Sison R, Sanguila M, Penrod M, Labonte M, Davey C, Austine Leon E, Diesmos M, Sy E. (2015). *Amphibians of the Philippines*, Part I: Checklist of the Species. *Proceedings of the California Academy of Science* 62(4):457-539.
- Mcleod DS, Siler CD, Diesmos AC, Diesmos ML, Garcia VS, Arkonco AO, Balaquit KL, Uy CC, Villaseran MM, Yarra EC, Brown RM. 2011. *Amphibians and Reptiles of Luzon Island*, V: The Herpetofauna of Angat Dam Watershed, Bulacan Province, Luzon Island, Philippines. *Asian Herpetological Research* 2(4):177-198
- Siler CD, Swab JC, Oliveros CH, Diesmos AC, Averia L, Alcalá AC, Brown RM. (2012). Amphibians and Reptiles, Romblon Island Group, Central Philippines: Comprehensive herpetofaunal inventory. *Check List* 8(3):443-462
- Welton LJ, Travers SL, Siler CD, Brown RM. (2014). Integrative taxonomy and phylogeny-based species delimitation of Philippine water monitor lizards (*Varanus salvator* complex) with descriptions of two new cryptic species. *Zootaxa* 3881 (3): 201-227