

## **Additional records of amphibians and reptiles from Nassau Mountain, Suriname**

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## Chapter 11

### Additional records of amphibians and reptiles from Nassau Mountain, Suriname

Paul E. Ouboter, Rawien Jairam and  
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#### INTRODUCTION

Following the CI RAP survey of October-November 2005, Nassau Mountain was visited again for a fish survey from March 29 - April 4, 2006 (short dry season). During this survey observations of amphibians and reptiles were noted as well. Thereafter a 10-day survey for amphibians and reptiles was carried out from July 15-24, 2005 (long rainy season). These surveys provided so much addition information that it is worthwhile to include these data in the RAP report.

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#### METHODS

During the March-April 2006 fish survey, amphibians and reptiles were only recorded when a species was accidentally encountered. This survey covered part of the plateau and upper slopes of Nassau Mountain, above an altitude of 250 m. During the July survey, line transects were walked during the morning, afternoon and night and every specimen was identified and recorded. If specimens could not be identified on sight, they were collected for later identification. In addition, frog calls were recorded for later identification by comparison with known frog calls. This survey covered only a small part of the plateau of Nassau Mountain, approximately 6 km in diameter around the base camp at the upper IJskreek. These methods provided information on species richness, composition and abundance. Specimens collected are preserved in the National Zoological Collection of Suriname (NZCS).

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#### RESULTS AND DISCUSSION

During the March/April and July 2006 surveys a total of 26 species of amphibians and 19 species of reptiles were recorded (Table 11.1). The amphibians were all frogs, the reptiles included one turtle, one crocodylian, 14 lizards and three snakes.

Of the species recorded, 11 species of amphibians were also reported during the RAP survey (Watling and Ngadino 2007, this volume), 15 species were not. The total number of amphibians now known for the Nassau Mountain (plateau and upper slopes) is 31 species. Of the reptiles, 8 species were also recorded by the RAP team, 11 species were not. This brings the total number of reptiles known from Nassau Mountain to 26 species.

Several species of special interest were collected. The *Atelopus* sp. found was very similar to *A. spumarius hoogmoedi* in shape and pattern, but instead of having yellow rings on a black dorsal and lateral color, it has pink rings (see photo pages). Only one specimen was found in March. Extensive searching for it in July did not produce another specimen, so it seems to be very rare.

The *Epipedobates trivittatus* specimens in this area have orange dorsolateral stripes, instead of green or green-yellow ones, as in specimens from other areas in Suriname. It should therefore be treated as a subspecies of *E. trivittatus*, awaiting formal description. A report by Hoog-

**Table 11.1.** Amphibians and reptiles recorded during the March/April and July surveys in 2006. Species recorded during the October/November 2005 RAP survey are also included for comparison. Numbers indicate number of specimens collected.

Taxon	March/April survey 2006	July survey 2006	Species recorded during RAP survey
<b>ANURA</b>			
<b>Bufonidae</b>			
<i>Atelopus</i> sp.	1		
<i>Bufo guttatus</i>		2	X
<i>Bufo margaritifera</i> complex		6	X
<i>Bufo marinus</i>		7	X
<b>Centrolenidae</b>			
<i>Cochranella</i> sp.		5	
<b>Dendrobatidae</b>			
<i>Colostethus beebei</i>	1		
<i>Colostethus beobatrachus</i>		6	X ?
<i>Colostethus degranvillei</i>	12	26	X
<i>Allobates femoralis</i>	2	2	
<i>Epipedobates trivittatus</i> subsp.	18	11	X
<b>Hylidae</b>			
<i>Phyllomedusa bicolor</i>		15	
<i>Phyllomedusa hypochondrialis</i>		2	
<i>Phyllomedusa tomopterna</i>		3	
<i>Hyla boans</i>	6	5	X
<i>Hyla crepitans</i>	1	21	X
<i>Hyla geographica</i>		2	
<i>Hyla leucophyllata</i>		8	
<i>Hyla marmorata</i>			X
<i>Hyla minuta</i>		18	
<i>Hyla</i> sp. 1		6	
<i>Osteocephalus taurinus</i>		1	X
<b>Leptodactylidae</b>			
<i>Adenomera</i> cf. <i>andreae</i>			X
<i>Adenomera</i> sp.		1	
<i>Eleutherodactylus chiastonotus</i>			X
<i>Eleutherodactylus</i> sp. 1		1	X
<i>Leptodactylus bolivianus</i>		1	
<i>Leptodactylus knudseni</i>		7	
<i>Leptodactylus mystaceus</i>		25	X
<i>Leptodactylus pentadactylus</i>			X
<b>Microhylidae</b>			
<i>Chiasmocleis shudikarensis</i>			X
<b>Pipidae</b>			
<i>Pipa aspera</i>		1	
<b>TOTAL NUMBER OF AMPHIBIANS</b>	<b>26</b>		<b>16</b>
<b>COMBINED TOTAL</b>		<b>31</b>	
<b>CHELONIA</b>			
<b>Chelidae</b>			
<i>Platemys platycephala</i>		2	
<b>Emydidae</b>			
<i>Rhinoclemmys punctularia</i>			X
<b>SQUAMATA - SAURIA</b>			
<b>Gekkonidae</b>			
<i>Coleodactylus amazonicus</i>		2	
<i>Gonatodes annularis</i>		1	
<i>Gonatodes humeralis</i>		2	

Taxon	March/April survey 2006	July survey 2006	Species recorded during RAP survey
<b>Polychrotidae</b>			
<i>Anolis fuscoauratus</i>			X
<i>Anolis nitens chrysolepis</i>		4	X
<i>Anolis ortonii</i>	1		
<b>Tropiduridae</b>			
<i>Plica plica</i>		3	
<i>Plica umbra</i>		1	
<i>Uranoscodon superciliosus</i>		1	
<b>Gymnophthalmidae</b>			
<i>Arthrosaura kockii</i>	1	6	X
<i>Cercosaura ocellata</i>		1	X
<i>Iphisa elegans</i>			X
<i>Leposoma guianense</i>		3	
<i>Neusticurus rudis</i>			X
<b>Teiidae</b>			
<i>Ameiva ameiva</i>	6	3	X
<i>Kentropyx calcaratus</i>	14	4	X
<b>Scincidae</b>			
<i>Mabuya nigropunctata</i>		1	X
<b>SQUAMATA - SERPENTES</b>			
<b>Colubridae</b>			
<i>Atractus zidoki</i>		1	
<i>Chironius</i> sp.			X
<i>Dipsas catsebyi</i>			X
<i>Dipsas pavonina</i>		1	
<i>Liophis</i> sp.			X
<b>Viperidae</b>			
<i>Bothrops atrox</i>	4	2	X
<b>CROCODILIA</b>			
<b>Alligatoridae</b>			
<i>Paleosuchus trigonatus</i>		2	X?
<b>TOTAL NUMBER OF REPTILES</b>	<b>19</b>		<b>15</b>
<b>COMBINED TOTAL</b>		<b>26</b>	

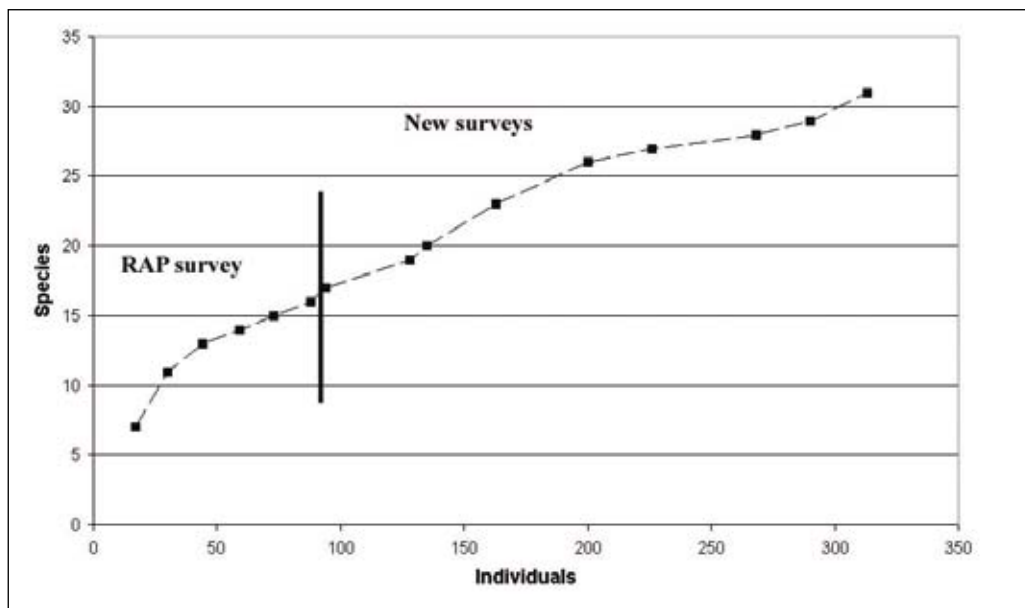


Figure 11.1. Species accumulation curve for amphibians in the Nassau Mountains.

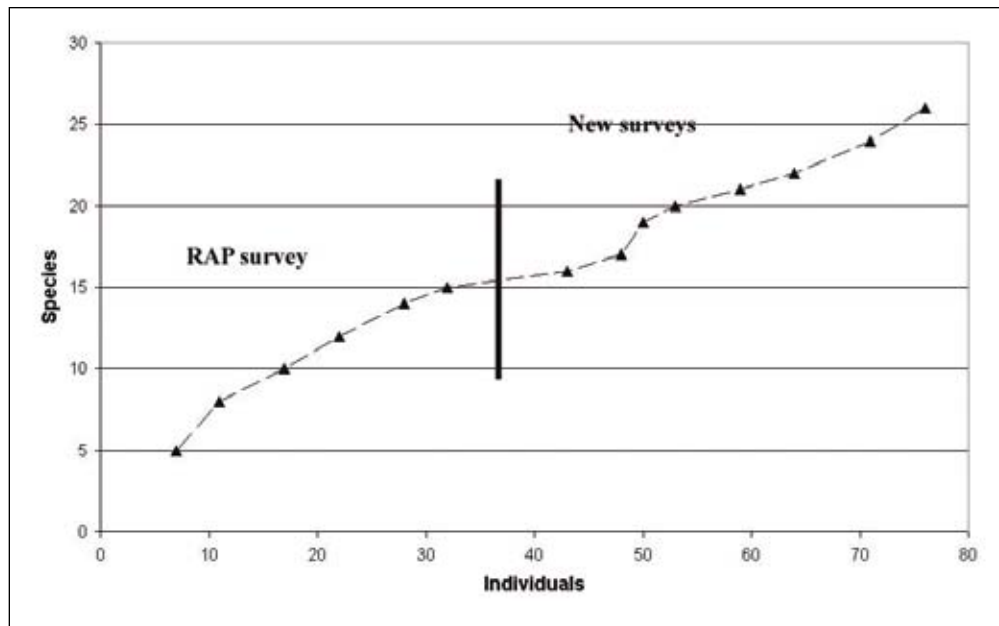


Figure 11.2. Species accumulation curve for reptiles in the Nassau Mountains.

moed (1975) mentions orange-striped *E. trivittatus* from both Lely and Nassau Mountains.

The *Adenomera* sp. found at Nassau, on the basis of photographs seems very similar to the *Adenomera* sp. recorded by the RAP team at Lely Mountain. These specimens could represent a new species to science as was already suggested by Watling and Ngadino (2007, this volume) for the Lely specimen, and should be investigated in more detail.

The *Eleutherodactylus* sp. found by us at Nassau, seems to be the *Eleutherodactylus* sp. 1 listed by Watling and Ngadino as a new species. Cooperation in describing this new species has already been established.

Our results show that it is very difficult to draw conclusions regarding total number of species on the basis of a single survey. The accumulation curve presented for amphibians by Watling and Ngadino seems almost to flatten, indicating that a high percentage of the species present is detected. However, new surveys almost doubled the number of amphibians for the mountain, and including the new data, the accumulation curve continues to increase (Figure 11.1). This shows that accumulation curves are only valid for the community of species active during the period of the survey and therefore only for the season in which the survey is carried out. Also estimates of species richness are decreased by species not active during survey periods. The RAP team's mean estimate for the number of frogs at Nassau, approximately 20, is far exceeded. The mean estimate of species richness for reptiles is approximately 26, which is the present figure of species known for the area. However, on the basis of zoogeography and the species composition of comparable mountain ranges like Brownsberg and Bakhuis, it can be predicted that many reptile species are still to be found on Nassau Mountain. The accumulation curve for reptiles (Figure 11.2)

shows a distinct slope, indicating that the inventory of reptiles is far from complete. We anticipate that the number of amphibians might also increase drastically with new surveys, especially when the lower slopes of Nassau Mountain are included. For the Bakhuis Mountains, three surveys with a combined duration of 66 days produced 58 species of amphibians and 47 species of reptiles (Ouboter, pers. obs.).

At present only a part of the herpetofauna of Nassau and Lely Mountains is known: the more common species and a random number of rarer species. An obvious conclusion is that, as long as additional data do not become available for the Nassau and Lely mountains, comparisons between the two mountains and with other areas could easily result in wrong conclusions.

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