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Reptile diversity of Phetchaburi province, western Thailand: an update

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(with 11 text-figures)

ABSTRACT.– New reptile material from Phetchaburi Province, western Thailand, is presented, including eight new provincial records, among which the Thai endemics *Gehyra lacerata* and *Isopachys gyldenstolpei*, and the second Thai record of the rare *Oreophis porphyraceus laticinctus*. A total number of 102 reptile species is currently known from the province, i.e., nearly a third of the total species number recorded so far from Thailand. Several of the new records were made in Kaeng Krachan National Park, which is now known to house at least 67 species. An updated provincial reptile list is provided.

KEYWORDS.– Reptilia, *Draco*, *Gehyra*, *Eutropis*, *Isopachys*, *Oreophis*, *Calliophis*, Phetchaburi Province, Kaeng Krachan National Park, Thailand, biodiversity.

Introduction

Of the 76 Thai provinces, tentative comprehensive reptile lists are currently available for only three: Phang-Nga, Phetchaburi and Phuket, all situated in peninsular Thailand, an area of special zoogeographical interest because it lies at the juncture of the limits of the Indo-Himalayan and Sundaic herpetofaunas. Each additional record from these provinces will thus contribute to a better understanding of the distribution patterns along the Thai-Malay peninsula.

Since Pauwels et al.'s (2003) detailed discussion on the zoogeography of Phetchaburi reptile fauna, a few additional mentions of Phetchaburi Province reptiles have been made available. For instance, Pauwels et al. (2004) added *Orthriophis taeniurus ridleyi* (Butler, 1899) to the provincial list, and Pauwels and Kheowyoo (2004) presented new records for the Ban Lat District: *Ahaetulla nasuta* (Lacepède, 1789) (also a provincial record, see below), *Lycodon capucinus* Boie, 1827, *Oligodon fasciolatus* (Günther, 1864) and *Naja kaouthia* Lesson, 1831. Malhotra and Thorpe (2004), in genetic studies, cited samples of *Cryptelytrops albolabris* (Gray, 1842) and *Popeia popeiorum* (Smith, 1937), two taxa already cited from the province (Pauwels et al., 2003; see Discussion), from "Phetburi province". Temsiripong (2007) claimed that Kaeng Krachan National Park is home to the largest wild Thai population of *Crocodylus siamensis*, although without providing any detail or vouchers. Several locality records by Nabhitabhata et al. (2004) from the province were given without reference to preserved specimens, but are actually based on material deposited in the Thai

National History Museum (Patumthani). For instance, the THNHM material from Kaeng Krachan National Park was subsequently summarized by Pauwels and Chan-ard (2006). Additional records for the park and for other parts of the province are detailed in the present contribution.

Materials and methods

Besides the Thai National History Museum, the other unpublished material presented here was deposited in the Chulalongkorn University Museum of Zoology (Bangkok), at the Banlatwitthaya School (Ban Lat) and at the Royal Belgian Institute for Natural Sciences (Brussels). Body measurements were made to the nearest millimeter. Paired meristic characters are given in the left/right order. Snake ventral scales were counted according to Dowling's (1951) method. The terminal tail scute is not included in the subcaudal count. The numbers of dorsal scale rows are given respectively at one head length behind head, at midbody (above the ventral corresponding to half of the total number of ventrals), and at one head length before vent.

Abbreviations: BWS: Banlatwitthaya School, Ban Lat; CUMZ: Chulalongkorn University Museum of Zoology, Bangkok; D.: district; DSR: dorsal scale rows; IRSNB: Royal Belgian Institute for Natural Sciences, Brussels; KKNP: Kaeng Krachan National Park; SVL: snout-vent length; TaL: tail length; THNHM: Thai National History Museum, Patumthani.

Figure 1. Map of Thailand showing location of Phetchaburi Province.

Results

New material and observations are presented hereafter by alphabetical order of taxa within orders. All taxa recorded from Phetchaburi Province, the present work included, are listed in Table 1.

Chelonii

Testudinidae

Manouria emys phayrei (Blyth, 1853): Photo voucher. BK photographed a specimen by day on 29 February 2005 (Fig. 2) at Ban Krang, KKNP, Kaeng Krachan D. It was crawling along a river. New locality record. This species has already been recorded from two other localities in KKNP (Pauwels and Chan-ard, 2006), but is not known outside the Park in Phetchaburi Province.

Lacertilia

Agamidae

Calotes emma emma Gray, 1845: The species was recorded for the first time from Phetchaburi Province, based on observations of specimens at Bang Krang, KKNP, Kaeng Krachan D., by Pauwels and Chan-ard (2006), but without vouchers. One of us (BK) took photographs of the species at the same locality on 18 February 2006 (Fig. 3).

Calotes mystaceus Duméril & Bibron, 1837: Voucher photo (Fig. 4) taken by BK at Ban Lat

Witthaya School, Ban Lat, Ban Lat D., on 14 May 2006. A population is living on the school campus. New locality record. The species had already been recorded from a nearby locality in the same district, but no vouchers were taken. So far, *Calotes mystaceus* is known from only two localities in the province.

Draco maculatus (Gray, 1845): Photo voucher (Fig. 5) taken by BK at Ban Krang, KKNP, Kaeng Krachan D., on 15 May 2006. The species is clearly recognizable by its diagnostic combination of blue and yellow colours on the dewlap (U. Manthey, pers. comm.). New province record.

Gekkonidae

Dixonius siamensis (Boulenger, 1898): THNHM 1299–1305: Forestry Training Center, Cha-am, Cha-am D. These specimens, caught in beach forest, were first noted by Nabhitabhata et al. (2004: 63), who did not provide explicit information about the vouchers. Pauwels et al. (2003) did not record the species from this district.

Gehyra lacerata (Taylor, 1962): IRSNB 17021: Ban Phoo Toom, Ban Lat D., Sept. 2003 (caught at night on rocks in a cultivated area); THNHM 1329: Forestry Training Center, Cha-am, Cha-am D. (collected from beach forest). New provincial record. This species seems endemic to Thailand, where it is known from the provinces of Chonburi, Kanchanaburi, Nakhon Ratchasima, Phetchaburi and Sa Kaeo (Nabhitabhata et al., 2004; present data). Recently, this species was cited from Vietnam (Nguyen et al., 2005), but without voucher specimens, so the presence of this species in Vietnam remains unconfirmed.

Hemidactylus platyurus (Schneider, 1792): No voucher specimen. Six adult specimens were observed by OSGP on 23 September 2006 around 1900 h, hunting insects near lights at the headquarters of Cha-am Forest Park, Cha-am D. New locality record.

Scincidae

Eutropis longicaudata (Hallowell, 1856): No voucher specimen. Two adults were clearly observed by OSGP in the sunny afternoon of 18 September 2003, on rocky outcrops in secondary forest on Khao Towmo, Kratluang Subdistrict, Tha Yang D. When approached, they disappeared into rock crevices and could not be caught. New province record.

Isopachys anguinoides (Boulenger, 1914): THNHM 1306–12: Forestry Training Center, Cha-am, Cha-am D. This series was caught in the litter and under sand in beach forest, in strict syntopy with *Riopa bowringii* and *Lygosoma quadrupes* (see below). It represents a new district record and illustrates the great ecological plasticity of this endemic species, found in evergreen forest, cave entrances, as well as in open areas on sandy soil (Pauwels et al., 2003; Pauwels and Chan-ard, 2006). All these specimens have 24 scale rows around midbody. Contrary to what was observed by Lang and Böhme (1990), the nasal scales are in contact in all specimens of the present series.

Isopachys gyldenstolpei Lönnberg, 1916: THNHM 1466–67: Forestry Training Center, Cha-am, Cha-am D. Caught in the litter in beach forest. Both specimens have 24 scale rows around midbody and agree in all respects with the current definition of that species. With SVL and tail lengths of 88 + 33 and 150 + 55 mm, respectively (tails complete), these specimens are the smallest known, the SVL variation of previously studied specimens being 167–220 mm (Lang and Böhme, 1990). New provincial record. This rare endemic species was previously known only from the provinces of Kanchanaburi and Prachuap Khiri Khan (Lang and Böhme, 1990), respectively north and south of Phetchaburi Province. With Hua Hin and Nong Kae in Prachuap Khiri Khan Province, Cha-am is the third locality where *I. gyldenstolpei* is known to occur along with *I. anguinoides*.

Lygosoma quadrupes (Linnaeus, 1766): THNHM 1330–33: Forestry Training Center, Cha-am, Cha-am D. Caught in the litter in beach forest; locally abundant. New district record.

Riopa bowringii (Günther, 1864): THNHM 1288–93, THNHM 1297–98: Forestry Training Center, Cha-am, Cha-am D. These specimens,

Table 1. Updated list of the reptiles of Phetchaburi Province, with occurrence per district (BLae = Ban Laem District; BLat = Ban Lat D.; CA = Cha-am D.; KK = Kaeng Krachan D.; KY = Khao Yoi D.; M = Muang D.; NYP = Nong Ya Plong D.; TY = Tha Yang D.). Data are based on Pauwels and Chan-ard (2006), Pauwels and Kheowyoo (2004), Pauwels et al. (2003, 2004) and the present work. Question marks indicate species for which no locality more precise than the province is available; however for these five marine taxa the most probable district by far is Muang D. Taxa are arranged alphabetically within orders and suborders.

Taxon/District	BLae	Blat	CA	KK	KY	M	NYP	TY
Chelonii								
Bataguridae								
Cuora amboinensis kamaroma				X				
Cyclemys dentata				X				
Heosemys grandis		X		X				
Malayemys macrocephala		X	X	X		X		
Siebenrockella crassicollis				X				
Cheloniidae								
Chelonia mydas			X					
Eretmochelys imbricata						X		
Testudinidae								
Indotestudo elongata				X				
Manouria emys phayrei				X				
Trionychidae								
Amyda cartilaginea		X						
Dogania subplana				X				
Pelochelys cantorii				X				
Crocodylia								
Crocodylidae								
Crocodylus siamensis				X				X
Tomistoma schlegelii				X				
Squamata								
Lacertilia								
Agamidae								
Acanthosaura crucigera				X				
Bronchocela cristatella				X				
Calotes emma emma				X				
C. mystaceus		X						
C. versicolor		X		X		X		
Draco blanfordii blanfordii				X				
Draco maculatus				X				
D. taeniopterus				X				
Gekkonidae								
Cnemaspis cf. kandiana				X				
Cnemaspis siamensis				X				
Cyrtodactylus brevipalmatus				X				
C. cf. oldhami				X				
Dixonius siamensis		X	X	X				X
Gehyra lacerata		X	X					
G. mutilata		X		X				
Gekko gecko		X	X	X				X

Hemidactylus frenatus			X			X			X	
H. platyurus			X		X	X				
Ptychozoon lionotum						X				
Lacertidae										
Takydromus sexlineatus ocellatus			X							
Scincidae										
Eutropis longicaudata										X
E. macularia						X				
E. multifasciata			X			X			X	
Isopachys anguinoides			X		X	X			X	
I. gyldenstolpei					X					
Lipinia vittigera						X				
Lygosoma quadrupes			X		X	X			X	
Riopa bowringii			X		X	X			X	X
Scincella melanosticta						X				
Sphenomorphus maculatus mitanensis						X				
S. cf. *tersus*						X				
Uromastycidae										
Leiolepis belliana belliana			X			X				
Varanidae										
Varanus nebulosus			X			X				X
V. rudicollis						X				
V. salvator		X	X			X				
Serpentes										
Acrochordidae										
Acrochordus granulatus									?	
Colubridae										
Ahaetulla nasuta			X							
A. prasina						X				
Boiga multomaculata					X	X				
B. siamensis			X						X	
Chrysopelea ornata ornatissima			X		X	X			X	X
Coelognathus radiatus			X			X	X		X	
Dendrelaphis cyanochloris						X				
D. pictus			X		X	X			X	
Dryocalamus davisonii			X		X	X				
Gonyosoma oxycephalum						X				
Lycodon capucinus			X		X	X				
L. fasciatus						X				
L. subcinctus subcinctus						X				
Oligodon fasciolatus			X		X	X				
O. mouhoti			X		X	X				
Oreophis porphyraceus laticinctus						X				
Orthriophis taeniurus ridleyi										X
O. taeniurus ssp.						X				
Ptyas korros			X			X			X	

P. mucosa		X				X		X
Elapidae								
Bungarus fasciatus		X						
Calliophis bivirgata flaviceps				X				
Calliophis maculiceps		X						
Enhydrina schistosa						?		
Hydrophis caerulescens						?		
H. ornatus						?		
Lapemis curtus hardwickii						?		
Naja kaouthia		X				X		
N. siamensis		X						X
Ophiophagus hannah				X				
Sinomicrurus macclellandi macclellandi				X				
Homalopsidae								
Cerberus rynchops	X							
Enhydris enhydris		X	X			X		
E. plumbea		X		X				
Erpeton tentaculatum						X		
Homalopsis buccata		X				X		X
Lamprophiidae								
Psammodynastes pulverulentus				X				
Psammophis indochinensis						X		X
Natricidae								
Rhabdophis nigrocinctus				X				
R. subminiatus subminiatus		X		X				
Xenochrophis flavipunctatus		X		X		X		X
X. trianguligerus				X				
Pareatidae								
Pareas carinatus				X				
P. margaritophorus				X				
Pythonidae								
Python brongersmai				X				
P. molurus bivittatus				X		X		
P. reticulatus reticulatus		X		X				
Typhlopidae								
Ramphotyphlops braminus		X	X					
Uropeltidae								
Cylindrophis ruffus		X		X		X		X
Viperidae								
Calloselasma rhodostoma	X	X	X					
Cryptelytrops albolabris		X		X				
Popeia fucata				X				
Xenopeltidae								
Xenopeltis unicolor		X		X		X		X
Total	**3**	**45**	**20**	**75**	**1**	**23/28?**	**0**	**15**

caught in the litter in beach forest, represent a new district record. All have 30 scale rows around midbody.

Varanidae

Varanus rudicollis Gray, 1845: Photo voucher (Fig. 6). One of us (PW) observed and photographed on 19 May 2007 an adult individual which was basking in a clearing in primary forest in KKNP, Kaeng Krachan D., precisely at UTM 47 N, x = 1417126 m, y = 0541187 m, altitude 807 m asl. Its total length was ca. 120 cm. The specimen, although approached very closely (ca. 1 m) made no attempt to bite nor to escape. New province record.

Varanus salvator (Laurenti, 1768): Photo voucher (Fig. 7). One of us (BK) photographed an adult individual that was foraging in an irrigation canal in a cultivated area at Laem Phak Bia, Ban Laem D. New locality record.

Serpentes

Colubridae

Ahaetulla nasuta (Lacepède, 1789): IRSNB 16995: Ban Lat D., no date. SVL 269 mm; TaL 132 mm. The species was mentioned by Pauwels and Kheowyoo (2004), but not supported by the reference to a voucher specimen, although it was indeed based on the present one. Its main meristic characters are: 15 DSR; 1 preventral + 188 ventrals; 152 subcaudals, divided; 8/8 supralabials with the 5th reaching the eye; 9/9 infralabials whose the first four in contact with the first pair of sublinguals on each side; anal divided.

Dendrelaphis pictus (Gmelin, 1789): BWS (adult, unnumbered): Wat Pa Pen, Ban Lat D., Jan. 2007. New locality record.

Dryocalamus davisonii (Blanford, 1878): THNHM 1278–79: Forestry Training Center, Cha-am, Cha-am D. Caught in beach forest. New district record.

Oligodon mouhoti (Boulenger, 1914): THNHM 1295: Forestry Training Center, Cha-am, Cha-am D. Caught in beach forest. New subdistrict record.

Oreophis porphyraceus laticinctus (Schulz & Helfenberger, 1998): Photo voucher. A juvenile specimen (total length ca. 30 cm, see Fig. 8) was observed by PW on 26 June 2006 in KKNP, Phanoen Thung Station, Kaeng Krachan D., precisely at UTM 47 N, x = 1417808 m, y = 0539698 m, altitude 967 m asl. It was found on the ground, basking in a clearing in primary rainforest. When disturbed, it quickly tried to take refuge under the closest dead fallen tree; it did not attempt to bite when handled. Although the specimen was released, the examination of the colour and meristic characters shown on the picture leaves no doubt as to its identification (compare with the descriptions provided by Schulz, 1996; Schulz and Helfenberger, 1998, and Grossmann and Tillack, 2004), especially the characteristic length of its red dorsal bands. This subspecies, whose distribution is mainly Malaysian-Indonesian, was known from a single specimen and a single locality in Thailand, in Ratchaburi Province (Niyomwan, 2004, 2006). The new locality partly fills a wide geographical gap between Ratchaburi and the closest Malaysian localities. Both known Thai localities are situated at much lower elevations (Niyomwan's specimen was found at 762 m asl) than had previously been reported for *O. porphyraceus laticinctus* (Grossmann and Tillack, 2004, gave an altitude range of 1,476–2,032 m asl). Thailand is thus home to three subspecies of *Oreophis porphyraceus*: the nominate subspecies in the extreme northwest (Chiang Mai, Chiang Rai, Mae Hong Son provinces), *O. p. coxi* in the north-east (Chaiyaphum, Loei, Phetchabun), and *O. p. laticinctus* in the west (Phetchaburi, Ratchaburi) and probably in the entire Tenasserim Range along the Thai-Malay peninsula (Grossmann and Tillack, 2004; Nabhitabhata et al., "2000" 2004; Prathumthong, 2001; Schulz, 1996; Schulz and Helfenberger, 1998, this work).

Ptyas mucosa (Linnaeus, 1758): BWS (adult, unnumbered): Moo 3, Huayluk Subdistrict, Ban Lat D. (coll. S. Sooksagnat). New locality record. CUMZ (R) 2002.298: Ban Lounsamo,

Thaleng Subdistrict, Tha Yang D. New district record.

Elapidae

Calliophis bivirgata flaviceps (Cantor, 1839): Photo voucher (Fig. 9). One of us (PW) observed and photographed on 5 April 2007 an adult individual in KKNP, Kaeng Krachan D., precisely at UTM 47 N, x = 1418239 m, y = 0541180 m, altitude 879 m asl. Its total length was ca. 100 cm. The snake was found by day on the ground in a shaded area in bamboo forest. As soon as it was approached, it quickly took refuge under the closest dead fallen tree. Pauwels et al. (2003: 39) discussed an unconfirmed record of this species in Phetchaburi Province; the present individual thus represents the first confirmed provincial record.

Calliophis maculiceps (Günther, 1858): IRSNB 16994: Ban Salakern, Ban Lat D., late Sept. 2003. Juvenile; 2+192 ventrals; divided anal; 18 subcaudals, divided; 13–13–13 DSR; SVL 126 mm; TaL 9 mm. QSMI 799: Ban Salakern, Ban Lat D., Oct. 2003. Male; 2 + ca. 185 ventrals (body damaged); divided anal; 24 subcaudals; 13–13–13 DSR; SVL 269 mm; TaL 25 mm. IRSNB 16994 was found by day by a farmer who was searching for snails as fishing bait under litter in a banana plantation. QSMI 799 was found dead on a road crossing a banana plantation. Both voucher specimens show the same colour pattern in preservative: head surface dark brown with beige patches on the snout, posterior supralabials and temporals; colour darkening on the nape where it forms a black nuchal collar, the lower extremities of which being visible from underview. The dorsum is beige, with a continuous black line on the vertebral scale row, extending from the nuchal collar to one scale before the tail tip, linking the two black complete rings on tail (one just after the cloacum, the second just before tail tip). Underside of head beige with dark brown markings on the infralabials, and the extremities of the nuchal ring visible on the lateral sides. Venter uniformly beige. Underside of tail withish with two black rings and black spots between those rings (2 spots in the juvenile, many more in the adult). New province record.

Homalopsidae

Cerberus rynchops (Schneider, 1799): CUMZ (R) 2002.297: Ban Laem, Ban Laem D. The species was known from this locality based on a photograph of a specimen (see Pauwels et al., 2003), but not supported by a voucher specimen. The present individual was caught by day in the mangrove at low tide while it was actively exploring crab holes in the mud. Four other specimens were seen by OSGP within 50 m, and the species is locally abundant.

Homalopsis buccata (Linnaeus, 1758): BWS (juv., unnumbered): Ban Nongkathong, Ban Lat D., 25 November 2004 (coll. S. Khonmee). New locality record.

Lamprophiidae

Psammodynastes pulverulentus Boie in Boie, 1827: Photo voucher (Fig. 10). One of us (BK) observed on 15 May 2006 an adult individual crossing over the road by day on Khao Phanoen Thung, KKNP, Kaeng Krachan D. The species had already been mentioned from three localities in KKNP by Pauwels et al. (2003), but no voucher was documented. Within Phetchaburi Province, the species has not yet been mentioned from outside the park. New locality record.

Pythonidae

Python brongersmai Stull, 1938: Photo voucher (Fig. 11). A subadult individual (total length ca. 120 cm) was observed by PW on 3 Dec. 2006 in KKNP, Kaeng Krachan D., at UTM 47 N, x = 1417761 m, y = 0540594 m, altitude 766 m asl. The python was in a shaded area on the ground in primary rainforest, ca. 5 m from a stream. It made no attempt to bite when handled. The species was already mentioned from the park by Pauwels and Chan-ard (2006), but no voucher material was presented. Fig. 11 definitively confirms the presence of this species in the Province.

Xenopeltidae

Xenopeltis unicolor Boie, 1827: No voucher specimen. In the late afternoon of 11 November 2004, one of us (OSGP) caught and released a subadult individual in a house garden near Phetchaburi College, Phetchaburi city, Muang D. It was found under wood debris. New district record.

Additional unpublished material from Phetchaburi Province includes an adult *Ramphotyphlops braminus* (Daudin, 1803) (THNHM 1296) (Typhlopidae) and two *Calloselasma rhodostoma* (Boie, 1827) (THNHM 1280–81) (Viperidae) caught in beach forest at the Forestry Training Center, Cha-am, Cha-am D., but these do not represent new locality records, since they were already known and documented through museum vouchers from Cha-am (Pauwels et al., 2003). We also report an unpublished specimen of *Cryptelytrops albolabris* (Gray, 1842) (IRSNB 16993) (Viperidae) from Ban Lat D., no date, but the species is already well known from this district (Pauwels et al., 2003).

Discussion

Since Pauwels et al.'s (2003) herpetological work on Phetchaburi Province, several taxonomic changes have occurred, bringing modifications to the species list. For instance, on the basis of a large-scale study on carapace morphology and head colour pattern, Brophy (2004) demonstrated that the populations of *Malayemys subtrijuga* (Schlegel and Müller, 1844) from western Thailand actually belong to *M. macrocephala* (Gray, 1859). *Malayemys subtrijuga* thus needs to be deleted from Phetchaburi's species list, and *M. macrocephala* added to it. The Phetchaburi Province records of "*Trimeresurus popeiorum*" are in fact referrable to *Popeia fucata* (Vogel, David and Pauwels, 2004) (see Vogel et al., 2004). *Boiga ocellata* Kroon, 1973 was shown to be a junior subjective synonym of *Boiga siamensis* Nootpand, 1971 (Pauwels et al., 2005).

It is to be mentioned that the photographs accompanying Pauwels and Kheowyoo's (2004) new records were not included by the authors, but added by the journal's editor; they thus do not represent the specimens listed, and at least one (supposed to illustrate *Leiolepis belliana*) is misidentified.

Kalyabina-Hauf et al. (2004), in the list of material examined for their molecular study of the genus *Acanthosaura*, mentioned a specimen of *A. crucigera* Boulenger, 1885 ("A89") from "Kaeng Krachan, Kao Yoi Districts, Phetchaburi Province, Central Thailand: 13°99'N, 1002° [sic] 25'E (tissue sample and photo from Peter P. Van Dijk)", and an *A. lepidogaster* (Cuvier, 1829) ("A147") from "Khao-Yoi, Thailand: 13°22'N, 99°81'40''E". The geographical coordinates provided for A147 falls within Phetchaburi Province in Khao Yoi D., but is located much more northern (apparently in Suphan Buri Province) by the authors on the map they provided (loc. cit.:8). *Acanthosaura lepidogaster*, whose presence in the province was not unambiguously recorded (see Pauwels and Chan-ard, 2006), is thus not yet confirmed.

The sympatry in the province of two forms belonging to the *Orthriophis taeniurus* species complex is surprising. Comparing the *O. taeniurus* ssp. shown by Schulz (1996: 264) and the typical *O. taeniurus ridleyi* specimen reported by Pauwels et al. (2004) unambiguously shows that they are distinct taxa. In view of the sympatry of *ridleyi* with other forms of the complex, the subspecies status of the form *ridleyi* should be re-evaluated. We believe it may deserve a specific status. A record of "*Elaphe taeniura*" from Khao Yoi D. by Nabhitabhata et al. (2004) remains unresolved.

Nabhitabhata et al. (2004) mentioned *Liopeltis scriptus* from Phetchaburi River, but no voucher was presented; its actual presence in the province is zoogeographically probable, but still unconfirmed. The survival of *Pelochelys cantorii* and *Tomistoma schlegelii* in KKNP requires confirmation; the evaluation of the viability of extant populations in the park is a priority conservation action for these two severely endangered species.

Conclusion

Pauwels and Chan-ard (2006) added 12 species to Phetchaburi Province: *Cnemaspis* cf. *kandiana* (Kelaart, 1852) (see Bauer et al., 2007 for comments about *C. kandiana* extralimital to Sri Lanka), *Ptychozoon lionotum* Annandale, 1905 (Gekkonidae), *Calotes emma emma* Gray, 1845, *Draco taeniopterus* Günther, 1861 (Agamidae), *Eutropis macularia* (Blyth, 1853), *Scincella*

Figure 2. *Manouria emys phayrei*, Ban Krang, Kaeng Krachan National Park. Photo. by B. Kheowyoo.

Figure 3. Adult *Calotes emma emma*, Ban Krang, Kaeng Krachan National Park. Photo. by B. Kheowyoo.

Figure 4. Adult *Calotes mystaceus*, Ban Lat Witthaya School, Ban Lat District. Photo. by B. Kheowyoo.

Figure 5. Adult *Draco maculatus*, Ban Krang, Kaeng Krachan National Park. Photo. by B. Kheowyoo.

Figure 6. Adult *Varanus rudicollis*, Kaeng Krachan National Park. Photo. by P. Wanchai.

Figure 7. Adult *Varanus salvator* from Laem Phak Bia, Ban Laem District. Photo. by B. Kheowyoo.

Figure 8. Juvenile *Oreophis porphyraceus laticinctus*, Phanoen Thung Station, Kaeng Krachan National Park. Photo. by P. Wanchai.

Figure 10. Adult *Psammodynastes pulverulentus*, Khao Phanoen Thung, Kaeng Krachan National Park. Photo. by B. Kheowyoo.

Figure 11. Subadult *Python brongersmai*, Kaeng Krachan National Park. Photo. by P. Wanchai.

Figure 9. Adult *Calliophis bivirgata flaviceps*, Kaeng Krachan National Park. Photo. by P. Wanchai.

melanosticta (Boulenger, 1887), *Sphenomorphus* cf. *tersus* (Smith, 1916) (Scincidae), *Lycodon fasciatus* (Anderson, 1879), *L. subcinctus subcinctus* Boie, 1827, *Xenochrophis trianguligerus* (Boie, 1827) (Colubridae), *Sinomicrurus macclellandi macclellandi* (Reinhardt, 1844) (Elapidae) and *Python brongersmai* Stull, 1938 (Pythonidae). With these 12 records, the eight additions made in the present report and the two others cited in the Introduction (*Ahaetulla nasuta* and *Orthriophis taeniurus ridleyi*), the number of reptile species currently recorded for Phetchaburi Province reaches 102. This represents nearly a third of the total number of reptile species recorded so far from the whole Kingdom of Thailand (Nabhitabhata et al., 2004; Pauwels and David, 2005). The addition of *Draco maculatus*, the rare *Oreophis porphyraceus laticinctus*, *Calliophis bivirgata flaviceps* and *Varanus rudicollis*, reinforces the importance of KKNP, which now includes at least 67 species (see Pauwels and Chan-ard, 2006), in the conservation of the Thai herpetofauna. Aside from its diversity, KKNP is of special interest, due both to its diversity in biotopes and elevations, and its zoogeographical position, at the confluence of the Sundaic and Indo-Himalayan faunas.

A number of predictions as to the presence of additional taxa in Phetchaburi Province were made by Pauwels et al. (2003) based on global species distribution patterns. Among the ca. 55 predicted taxa (including sea snakes), the following 12 have already been found to date: *Calotes emma emma*, *Draco maculatus* and *D. taeniopterus*, *Ptychozoon lionotum*, *Eutropis longicaudata*, *Isopachys gyldenstolpei*, *Ahaet-*

ulla nasuta, *Lycodon subcinctus subcinctus*, *Oreophis porphyraceus laticinctus*, *Calliophis bivirgata flaviceps*, *Calliophis maculiceps* and *Python brongersmai*. Among the records made in Phetchaburi Province since Pauwels et al. (2003), the following 10 species, several representing range extensions, were not included in the species expected by these authors: *Cnemaspis* cf. *kandiana*, *Gehyra lacerata*, *Eutropis macularia*, *Scincella melanosticta*, *Sphenomorphus* cf. *tersus*, *Varanus rudicollis*, *Lycodon fasciatus*, *Orthriophis taeniurus ridleyi*, *Sinomicrurus macclellandi macclellandi* and *Xenochrophis trianguligerus*.

Over 25% of the species records for Phetchaburi Province are based on the observation of a single specimen. Most search efforts were concentrated in Ban Lat D. and Kaeng Krachan D., which are the only districts which benefitted from dedicated herpetological surveys, and where the higher species numbers were found (45 and 75, respectively, see Table 1). Records from other districts were made opportunistically, except for a short survey by TC in Cha-am D.; a single record is still available from Khao Yoi D. and none at all for Nong Ya Plong D. These facts clearly indicate that the herpetological exploration of Phetchaburi Province is still largely incomplete, and that its reptile fauna is probably much richer than demonstrated.

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