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## NEWS REPORTS

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### NEW SPECIES OF HERPETOFAUNA FROM THE GREATER MEKONG REGION OF SOUTHEAST ASIA REPORTED BY WWF.

A remarkable 163 new species discoveries have been made in the past year in the jungles and rivers of the Greater Mekong region of Southeast Asia. The new finds in 2008 comprise 100 plants, 28 fish, 18 reptiles, 14 amphibians, 2 mammals and 1 bird species, highlighting the biological importance of this unique and diverse land. Among the new herpetofauna (Table 1) is a



**Figure 1.** *Goniurosaurus catbaensis*. © Thomas Ziegler.

rare and endangered leopard gecko. The Cat Ba Leopard Gecko (*Goniurosaurus catbaensis*) (Fig. 1) is a beautiful technicoloured gecko known only from Cat Ba Island (a National Park) in northern Vietnam (Ziegler et al., 2008). It has a mesmerizing pattern adorning the entire length of its body. Relatively large, orange-brown, cat-like eyes are accompanied by a head pattern consisting of a dark marbling; this leads to leopard stripes on the body and five immaculate contrasting black and white bands on the tail. A creature that certainly appears to be from another world, the lizard's long and thin legs, digits and claws add to its fantastical appearance. The scientific name emphasizes the importance of Cat Ba Island, the largest of 366 islands in the 285 km<sup>2</sup> Cat Ba

Archipelago. The primary habitat within the National Park is tropical moist forest on limestone, which houses a number of endemic and rare species, foremost amongst which is the Cat Ba Langur (*Trachypithecus p. poliocephalus*). Scientists believe the high level of endemism may be due to the long separation of the island from continental Vietnam. The island was formed 7,000-8,000 years ago during glacial ice melting. Unfortunately, the other eleven known species of *Goniurosaurus* have become valuable commodities in the herpetocultural trade and the



**Figure 2.** *Limnonectes megastomias*. © David McLeod.

limited distribution of the new species *G. catbaensis* makes it susceptible to over-collecting. Scientists believe that the species should be classified as rare and endangered, proposing its listing in the Red Data Book for Vietnam. They are also recommending that the Vietnamese government put sanctions on the collection of *Goniurosaurus* species in order to protect populations and the habitats in which they occur.

A voracious “bird eating”, fanged frog is among the new anuran species for Thailand. *Limnonectes megastomias* (Fig. 2) is an opportunistic predator, lying in wait for its prey in streams (McLeod, 2008). The species has a diverse diet which includes frogs and insects. According to scientists, the species is also known

Species	Scientist(s)	Distribution in Greater Mekong
<b>AMPHIBIA</b>		
<i>Bufo luchunnicus</i>	Yang & Rao	Yunnan
<i>Bufo menglianus</i>	Yang	Yunnan
<i>Hylarana hekouensis</i>	Fei, Ye, Jiang & Xie	Yunnan
<i>Hylarana menglaensis</i>	Fei, Ye, Jiang & Xie	Yunnan
<i>Limnonectes megastomias</i>	McLeod	Thailand
<i>Odorrana macrotympana</i>	Yang	Yunnan
<i>Odorrana rotodora</i>	Yang & Rao	Yunnan
<i>Odorrana yentuensis</i>	Tran, Orlov & Nguyen	Vietnam
<i>Philautus quyeti</i>	Nguyen, Hendrix, Böhme, Vu & Ziegler	Vietnam
<i>Polypedates impresus</i>	Yang	Yunnan
<i>Polypedates spinus</i>	Yang	Yunnan
<i>Rana cangyuanensis</i>	Yang	Yunnan
<i>Rhacophorus chuyangsinensis</i>	Orlov, Nguyen & Ho	Vietnam
<i>Rhacophorus marmoridorsum</i>	Orlov	Vietnam
<b>REPTILIA</b>		
<i>Cnemaspis biocellata</i>	Grismer, Onn, Nasir & Sumontha	Thailand
<i>Cryptelytrops honsonensis</i>	Grismer, Ngo & Grismer	Vietnam
<i>Cyrtodactylus eisenmani</i>	Ngo	Vietnam
<i>Cyrtodactylus grimeri</i>	Ngo	Vietnam
<i>Cyrtodactylus hontreensis</i>	Grismer, Ngo & Grismer	Vietnam
<i>Cyrtodactylus huynhi</i>	Ngo & Bauer	Vietnam
<i>Cyrtodactylus pseudoquadrivirgatus</i>	Rösler et al	Vietnam
<i>Cyrtodactylus takouensis</i>	Ngo & Bauer	Vietnam
<i>Cyrtodactylus ziegleri</i>	Nazarov et al	Vietnam
<i>Fimbrios smithi</i>	Ziegler, David, Miralles, van Kien & Quang Truong	Vietnam
<i>Gekko nutaphandi</i>	Bauer, Sumontha & Pauwels	Thailand
<i>Goniurosaurus catbaensis</i>	Ziegler, Truong, Schmitz, Stenke & Rosler	Vietnam
<i>Oligodon deuvei</i>	David, Vogel & van Rooijen	Vietnam/Lao PDR Cambodia/Thailand
<i>Oligodon moricei</i>	David, Vogel & van Rooijen	Vietnam
<i>Oligodon pseudotaeniatus</i>	David, Vogel & van Rooijen	Thailand
<i>Oligodon saintgironsi</i>	David, Vogel & Pauwels	Vietnam/Cambodia Lao PDR /Thailand
<i>Opisthotropis tamdaoensis</i>	Ziegler, David & Vu	Vietnam
<i>Pseudocalotes khaonanensis</i>	Chanard, Cota, Makchai & Laoteow	Thailand

**Table 1.** New herpetofauna of the Greater Mekong Region.

to eat birds, as feathers were discovered in the frog's faeces. The species has a greatly enlarged head and enlarged 'fangs' within its mouth. These are actually growths that protrude from the jawbone. Males of the species use the 'fangs' in combat and scientists have observed frogs with

missing limbs and multiple scars. There are a number of differences between the males and females of this species. Unlike many other frogs, the males are larger than the females and have exceptionally large mouths and powerful jaws that appear out of proportion to the rest of the

body. The frog has been found in three isolated and remote protected areas in eastern Thailand: at medium-high altitudes (600-1,500 m) at Sakaerat Environmental Research Station (SERS); in Pang Si Da National Park and in the Phu Luang Wildlife Sanctuary. Remarkably, the SERS area has been the subject of scientific study for more than 40 years, but this frog had escaped detection until now. Scientists state that much remains unknown about this and many other species in terms of their natural history, reproductive biology and ecology. For example, it is still unclear whether populations of these frogs are stable or in decline.

Among new snakes encountered is a tiger-striped Pit-viper (*Cryptelytrops honsonensis*). It was found on a tiny island off the coast of Vietnam (Grismer et al., 2008a). Named after the Hon Son Island in Rach Gia Bay in the Kien Giang Province of southern Vietnam on which the endemic species was discovered, the new half-metre-long snake has a straw yellow body colour with approximately 92 zig-zag 'tiger stripes'. The species is the latest of 45 Pit-vipers to have been discovered in Southeast Asia belonging to the genus *Trimeresurus* sensu lato, the largest Asian Pit-viper genus. This genus is generally nocturnal, terrestrial or arboreal and inhabits a wide variety of environments ranging from meadows to plantations, open bushy areas, secondary lowland forests and primary cloud forests. Hon Son is a very small island (ca. 22 km<sup>2</sup>) composed of large granitic boulders that extend from the shoreline to its peaks with little to no primary vegetation remaining. At half-metre-long and orange-eyed, *Cryptelytrops honsonensis* was encountered along trails, where the species was first discovered moving over small branches of Bamboo that were lying across a small pile of rocks. The species is considered potentially endemic to the island.

Another unique frog species found was a new Rough-coated Treefrog (*Philautus quyeti*). It was discovered in Vietnam's Truong Son mountain range (Nguyen et al., 2008). Its head and body have a rough skin texture. The frog was found in the montane evergreen and karst forests within Quang Binh Province. The new species is

relatively small among Rhacophorid treefrogs. It has reduced finger webbing and a unique head that is longer than it is wide. This species joins the *Philautus* genus which includes approximately 150 species. The discovery is the latest in a long line of new fascinating finds from the Truong Son range, the most celebrated being the Saola or Vu Quang Ox (*Pseudoryx nghetinhensis*).

A secretive new snake also revealed itself for the first time. The half-metre-long snake, *Oligodon devei*, is elusive and mostly encountered lurking



Figure 3. *Oligodon devei*. © L. Lee Grismer.

among vegetation and in gardens of small subsistence farms. The species has two strongly enlarged and blade-like fangs and a unique stripe that extends the length of the snake which varies in colour between males and females. Males display an orange or rusty brown vertebral stripe; females, a more subdued yellowish brown stripe with darker dots. The snake also has a dark brown heart-shaped arrow pattern on its head pointing forward. Due to its elusive nature, the distribution of the species is still unknown but has so far been recorded in southern Vietnam, Vientiane and near Lao PDR (Peoples Democratic Republic) and Pursat Province in Cambodia. Scientists expect the species to also occur in Thailand. The species is among four new snakes from the *Oligodon* genus discovered in the last year (David et al., 2008). During surveys in the isolated karsts of the Nakawan Range that span the Thai-Malaysian

border, a Painted Lizard (*Cnemaspis biocellata*) was discovered (Grismer et al. 2008b). This new gecko is one of the most brightly coloured of the new species. The lizard displays five yellow, butterfly-shaped blotches extending from the shoulder region to the base of the tail. Males have a ground colour of dull yellow which is overlain by grey areas that highlight the yellow markings and shoulder patches. Females have a base colour of light brown and lack shoulder markings. The species is generally nocturnal but was also seen by day on the shaded surfaces of large rocks and tree trunks. When encountered by scientists, the lizards were amazingly quick and agile. The name of the species, *biocellata*, refers to the two small 'eyes' on the 'face' pattern that is displayed on the back of the gecko's head.

The Greater Mekong spans the countries of Cambodia, Lao PDR, Myanmar, Thailand, Vietnam and Yunnan Province of China, through which the mighty Mekong River flows. The region boasts 16 global eco-regions, critical landscapes of international biological importance, more than anywhere else on mainland Asia. The new species are the latest additions to an already impressive list found in this globally-unique landscape, that is home to Indochinese tigers, Javan Rhinos, rare primates and ungulates, Irrawaddy River Dolphins and the Mekong Giant Catfish. More than 1,000 new species have been discovered here over the past decade. However, the diverse species and habitats of the Greater Mekong region continue to face a wave of ever-growing threats, including habitat loss, infrastructure development, and unsustainable, illegal, natural resource use (Tordoff et al., 2007). As a consequence as little as 5% of the region's natural habitats remain intact today.

Climate change is compounding these threats. WWF is working to conserve 600,000 km<sup>2</sup> of the Mekong Region by seeking to reduce pressures such as unsustainable resource use, unsustainable infrastructure development and habitat loss so that species are more able to cope with climate pressures. They also aim to help protect key features of the region's ecosystems such as free-flowing rivers and trans-boundary forests that will allow species to adapt to changes in climate.

WWF also supports the formulation of Asia's first regional climate change adaptation agreement to provide a legal framework for regional cooperation and coordination on climate change. The full report *Close Encounters: Greater Mekong Species Discoveries 2008* is found at: [www.wwf.org.uk](http://www.wwf.org.uk).

## REFERENCES

- David, P., Vogel, G. & Rooijen, J.V. (2008). A revision of the *Oligodon taeniatus* (Günther, 1861) group (Squamata: Colubridae), with the description of three new species from the Indochinese Region. *Zootaxa* **1965**, 1-49.
- Grismer, L.L., van Tri, N. & Grismer, J.L. (2008a). A new species of insular Pitviper of the genus *Cryptelytrops* (Squamata: Viperidae) from southern Vietnam. *Zootaxa* **1715**, 57-68.
- Grismer, L.L., Onn, C.K., Nasir, N. & Sumontha, N. (2008b). A new species of Karst dwelling gecko (genus *Cnemaspis* Strauch 1887) from the border region of Thailand and Peninsular Malaysia. *Zootaxa* **1875**, 51-68.
- McLeod, D.S. (2008). A new species of big-headed, fanged Dicroglossine frog (genus *Limnonectes*) from Thailand. *Zootaxa* **1807**, 26-46.
- Nguyen, Q.T., Hendrix, R., Böhme, W., Thanh, V.N. & Ziegler, T. (2008). A new species of the genus *Philautus* (Amphibia: Anura: Rhacophoridae) from the Truong Son Range, Quang Binh Province, central Vietnam. *Zootaxa* **1925**, 1-13.
- Tordoff, A.W., Baltzer, M.C., Davidson, P., Fellowes, J., Quynh, H.Q. & Tung, T.T. (2007). Ecosystem profile: Indo-Burma biodiversity hotspot Indochina Region. Final Version May 2007. USA: Critical Ecosystem Partnership Fund, Conservation International.
- Ziegler, T., Nguyen, Q.T., Schmitz, A., Stenke, R. & Rösler, H. (2008). A new species of *Goniurosaurus* from Cat Ba Island, Hai Phong, northern Vietnam (Squamata: Eublepharidae). *Zootaxa* **1771**, 16-30.

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