

Horsfield's fruit bat (Pteropodidae) is more common than it was supposed

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New records of the Horsfield's fruit bat, *Cynopterus horsfieldii*, made in Binh Phuoc and Gia Lai provinces of Vietnam are discussing. Those findings increase known distribution range of this Malayan species and let one to suppose that this bat possibly inhabits available biotopes throughout the Southern Vietnam and maybe in neighboring parts of Cambodia.

Key words: fruit bats, distribution, new records, Vietnam, *Cynopterus*.

Horsfield's fruit bat (*Cynopterus horsfieldii* Gray, 1843) – is the largest and most uncommon *Cynopterus* species in the Indochinese bat fauna. Until latest years, this Malayan species was known in the region only from Kat Tien national park in Dong Nai province, Vietnam (Kruskop 2013). However, recently this uncommon bat was found in other places of Southern and Central Vietnam, demonstrating definitely more wide distribution in the Indo-chinese region than it was thought previously.

MATERIAL AND METHODS

Bats mentioned below were captured during the field studies held in the framework of scientific activity of the Vietnamese-Russian Tropical Center. Animals were captured by the monofilament mist nets 'Ecotone' set across the possible bat flight paths in classical manner (Kunz, Kurta 1988).

This bat is quite similar in external measurements to more common *C. sphinx* (Vahl, 1797); the two species can be divided by body weight (usually more than 50 g in *C. horsfieldii* and less than 50 g in *C. sphinx*) and by size and shape of cheek teeth (those teeth in *C. horsfieldii* are more massive, with more pronounced relief (Francis, 2008), width of lower premolar and first lower molar are 1.8 mm or more (Kuskop 2013)).

RESULTS AND DISCUSSION

In November, 2015, during the short-time field trip, one adult postlactating female of Horsfield's fruit bat was captured in Bugiamap national park in Binh Phuoc province, close to Cambodian border. Bat was captured into mist net set nearby the forest station above the saddleback of the ridge, in small vegetation opening, at the elevation of ca. 540 m. The primary identification

was later confirmed by body weight (56.9 g) and size and shape of cheek teeth. Other animals of the same bat were neither captured nor authentically observed in the same area, making local status of the species questionable.



Fig. 1. Distribution of *Cynopterus horsfieldii* in mainland Asia north from Isthmus of Kra (after Bates et al. 2008; Francis 2008), and Vietnamese records of this species: 1 – Kat Tien, Dong Nai province, 2 – Bu Gia Map, Binh Phuoc province, 3 – Kon Ka Kinh, Gia Lai province.

Рис. 1. Распространение *Cynopterus horsfieldii* в материковой Азии к северу от перешейка Кра (по: Bates et al. 2008; Francis 2008) и размещение вьетнамских находок этого вида: 1 – Каттъен, провинция Донгнай, 2 – Бузямап, провинция Биньфык, 3 – Конкакин, провинция Зялай.

In may 2016, during the complex ecological studies held in Konkakinh national park, Gia Lai province, in about 330 km north-east from Kat Tien, an adult male and adult postlactating female of Horsfield's fruit bats were captured into mist net set across the small river in the primary forest at the elevation of ca. 1000 m. Animals were captured together with some number of common *Cynopterus sphinx*, and was primarily divided from them by more heavy body proportions. Later the identification was confirmed by the body weight (62.0 g) and tooth measurements. Presence of postlactating female demonstrates that the Horsfield's fruit bats may occur in Konkakinh permanently and reproduce there. However, we did not register any other individuals of this species in the mentioned park (while individuals of *C. sphinx* were captured in large numbers and in different habitats). The Konka-

kinh record is currently the most northern and most high-elevation for this species in Indochina.

Until recently, Horsfield's fruit bat was not listed in the fauna of Indochina (see e.g. Corbet, Hill 1992; Huynh et al. 1994; Borisenko, Kruskop 2003; Can et al. 2008), and its distribution in the mainland Asia north from Isthmus of Kra was restricted to south-west of Thailand (Corbet, Hill 1992). According to IUCN data (Bates et al. 2008), this bat occurs have sporadic distribution across the Thailand, but not occurs in any other South-East Asian country north from Kra. Presence of this species in Vietnam was first stated by Francis (2008) and later confirmed due to sequencing of cytochrome-c-oxidase mitochondrial gene, in the ranks of Barcoding of Life project (Francis et al. 2010; ID number of Kat Tien specimen is ROM MAM 110755). Later we confirm presence of *C. horsfieldii* in Kat Tien national park; however, this location for years was the only one for this species in Vietnam.

This bat was recently reported for two places in Laos (Thomas et al. 2013). Francis (2008) also mentioned Horsfield's fruit bat for Cambodia, however this species not mentioned in the latest faunal list of this country (Kingsada et al. 2011).

Recent records significantly enlarge known distribution area of the species in Indochina. Bugiamap represents western outcrop of the Dalat plateau, and Konkakinh is situated inside the large Kontum plateau, which represents the most southern part of the Truong Son mountain chain. Our findings let one suppose that actually *C. horsfieldii* inhabits acceptable biotopes on both plateaus up to the elevation of 1000 m ASL. Since Bugiamap is situated almost on the Cambodian border, and connected with huge primary forested areas on the Cambodian side, we may predict occurrence of *C. horsfieldii* also in eastern Cambodia.

Most probably, Horsfield's fruit bat has naturally low population density, and previous researches, if capture, mixed this species up with common *C. sphinx*. Recent records in Laos well correspond with this point of view. However, we cannot exclude version that *C. horsfieldii*'s distribution range in Indochina increased in last years for some reasons. Unfortunately, currently we cannot testify this hypothesis. Maybe further additional findings together with studies of distribution of other Malayan elements in Vietnamese fauns let somebody to clarify this question. Also the genetic similarity of distinctiveness between Indochinese animals and main species populations in Malaysia and Indonesia require special studies.

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РЕЗЮМЕ

Крускоп С.В., Васеньков Д.А. 2016. Крылан Хорсфилда (Pteropodidae) более обычен, чем это предполагали. – Plecotus et al. **19**: 27–31.

Обсуждаются новые находки крылана Хорсфилда (*Cynopterus horsfieldii* Gray, 1843) – наиболее крупного и редкого представителя рода *Cynopterus* в фауне Индокитая. Из-за сходных линейных размеров этот вид иногда путают с

широко распространённым и многочисленным *C. sphinx*, от которого он отличается в среднем большей массой тела и массивными крупными щечными зубами. Этот малайский вид долгое время был известен в материковой Азии к северу от перешейка Кра лишь из Таиланда. Во Вьетнаме его присутствие было выявлено в национальном парке Каттён (провинция Донгнай) благодаря программе генного баркодинга. Позже нами было подтверждено обитание крыланов Хорсфилда в Каттёне. В ноябре 2015 года взрослая самка крылана Хорсфилда была поймана в национальном парке Бузямап, на северо-западе провинции Биньфык вблизи границы с Камбоджой. В мае 2016 года взрослый самец и постлактацирующая самка были пойманы в заповеднике Конкакин, на севере провинции Зялай, примерно в 330 км северо-восточнее Каттёна. Эта точка (высота около 1000 м н.у.м.) — одновременно еще и самая высокая для данного вида крыланов в Индокитае. Эти две находки позволяют предположить, что крылан Хорсфилда, вероятно, населяет подходящие местообитания по всему югу Центрального Вьетнама, а также, возможно, прилежащие территории Камбоджи.

Ключевые слова: крыланы, распространение, новые находки, Вьетнам, *Cynopterus*.