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NOTE

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A new country record of Smooth-backed Gliding Gecko *Gekko lionotum* (Annandale, 1905) (Squamata: Gekkonidae) from Bangladesh

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Gliding geckos are cryptic species distributed in the tropical forests of southeastern Asia, including southern China (Pawar & Biswas 2001). Among the 60 species of *Gekko*, four gliding geckos are placed under the subgenus *Ptychozoon* (Wood et al. 2020), restricted to India, Indonesia, Singapore, the Philippines, and the mainland southeastern Asian countries (Uetz et al. 2020). Although species of this subgenus have been recorded from northeastern India (Pawar & Biswas 2001) and Myanmar (Grismer et al. 2018), they have not been reported from Bangladesh. We present here a new country record of *Gekko lionotum* from Bangladesh (Figure 1).

Observed specimen: Padma Bridge Museum #2246, one adult individual, 4.iii.2020, Sangu Wildlife Sanctuary, Bandarban, Bangladesh, 22.689N & 92.166E, collected by Md. Rashedul Kabir Bhuiyan and his team.

We found a freshly dead specimen, later donated to Padma Bridge Museum, Dogachi, Sreenagar, Munshiganj. In the museum this specimen was identified as a Smooth-backed Gliding Gecko *Gekko lionotum* Annandale, 1905 based on the body features and other morphometric

measurements. Considered a rare specimen and a valuable resource for future studies, the gecko was preserved in alcohol as a wet specimen. According to The Reptile Database (www.reptile-database.org/), this species is distributed in India (Mizoram), Myanmar (Rakhine and Bago), Laos, Malaysia, Cambodia, Vietnam, and Thailand.

We combined characters to identify the species after Brown et al. (1997), Brown (1999), and Grismer et al. (2018). The key characters were: snout-vent length 94.8mm; the absence of imbricated scales to support parachute, dorsal tubercles and postorbital stripe; the presence of predigital notch in preantibrachial expansion; 14–15 lamellae in 4th toe; five caudal lobes fused to form terminal lobe of the tail and denticulated laterally with expansion; absence of caudal tubercles in tail terminus; angling is slight between caudal lobes. We compared these characteristics with other species of the subgenus *Ptychozoon* (Table 1). The characteristics clearly show the present specimen is *G. lionotum*.

Morphometric data and coloration: We measured morphometric characteristics using regular slide calipers

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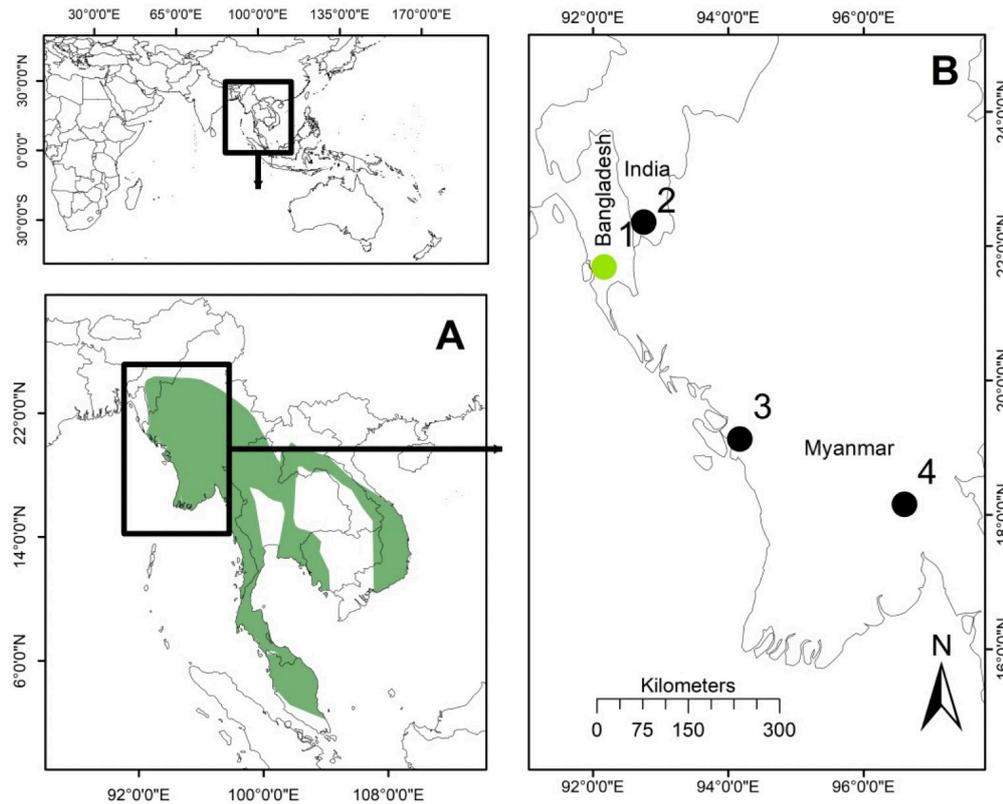


Figure 1. A—Global distribution of *Gekko lionotum* according to IUCN (2018) | B—Present record (1) of *Gekko lionotum* from Sangu Wildlife Sanctuary, Bandarban Bangladesh, along with nearest previous record from (2) Ngeingui Wildlife Sanctuary, Mizoram, India (3) Chin Minbyin Village, Rakhine State, Myanmar (4) Chaung Gwa Village, Bago Division, Myanmar

Table 1. Comparison of species under the subgenus *Ptychozoon* (after Brown et al. 1997, Brown 1999, and Grismer et al. 2018).

Characters	<i>P. lionotum</i>	<i>P. horsfieldii</i>	<i>P. kuhli</i>	<i>P. trinotaterra</i>
SVL (mm)	94.8	73.9	107.8	71.3
Dorsal tubercle	absent	absent	2-6 convex-shaped	0-1 flat-shaped
Parachute support scales	absent	present	present	present
Predigital notch	present	absent	absent	absent
4 th toe lamellae	14–15	11–13	12–16	12–14
Postorbital stripe	absent	present	absent	present
No. of caudal lobes fused	5	2/3	1–3	1/2

with an accuracy of 0.1mm (Table 2). We compared our morphometric data with the described specimen of Pawar & Biswas (2001). Our comparison matches the description given by Grismer et al. (2018) and the nearest specimen from Mizoram, India (Pawar & Biswas 2001). We also observed the color pattern and body shape of our specimen. The upper parts of the body are gray to dark gray and the underparts are yellowish with black spots (Image 1 & 2). The anterior ventral part is light grayish-yellow and the posterior is dark grayish-yellow. Ten transverse, distinct, wavy, blackish-gray

bands present in the dorsal side (one in the head, four in inter-limb area, five in the tail). The head is triangular, with two dark gray-brown bands running from eye to ear opening and a deep gray-brown band present at the central region. The neck is narrow, small, and brownish color; thighs and arms are similar in color. The tail is slightly shorter than the snout-vent length, dark black at the tip, and both dorsal and ventral sides are covered with a dark gray-black band. The skin of limbs, toes, and fingers is extended and lamellae are yellowish-white in color. Coloration of the body can perfectly match with



Image 1. Dorsal view of *Gekko lionotum*



Image 2. Ventral view of *Gekko lionotum*

Table 2. Comparative morphometric data of the present specimen and literature records of *Gekko lionotum* (after Pawar & Biswas 2001; measurement in mm).

Parameters	Present Specimen (PBM Reg. #2246)	<i>Ptychozoon lionotum</i>
A. Morphometric characters		
Total Body Length (TBL)	184.6	168.7
Snout Vent Length (SVL)	94.8	
Body Width in the widest part (BW)	14.5	
Neck Width (NW)	11	11.9
Head Length (HL)	19.5	16.8
Head Width (HW)	20.4	16.8
Tail Length (TL)	89.8	93
Tail Width (TW)	7.5	7.6
Eye Diameter (ED)	5.2	4.8
Ear Opening (EO)	1.5	2.3
Distance between Eyes (DE)	9.1	10.3
Distance between Eye and Ear (DEE)	7.5	7.7
Distance between Eye and Nostril (DEN)	6.7	8.2
Distance between Nostrils (DN)	3.7	3.7
Total Forelimb Length (TFL)	32.5	27.8
Forearm Length (FL)	22.1	18.7
Total Hindlimb Length (THL)	42.3	39.6
Hindlimb (Femur) Length (HFL)	16.5	13.6
Hindlimb (Tibio-fibula) Length (HTL)	16.0	12.7
Inter-limb Distance (ILD)	47.6	47
Forelimb Digit (FD)	6.9+9.5+12.5+13.3+11.4	
Hindlimb Digit (HD)	9.5+13.5+14.4+14.8+11.3	
Mouth opening (MO)	17.2	
B. Scales and Digits		
Supralabials (Left/Right)	11/11	10/11
Infralabials (Left/Right)	9/9	9/9
Mental	01	
Post-mental	02	
Rostral	01	
Postrostral/Supranasal	02	
Femoral pores	02	
Forelimb lamellae	11+12+12 +15+13	11/10+11/13+12/16+15/15+14/14
Hindlimb lamellae	11+12+14 +14+12	11/11+12/12+16/15+14/14+14/14

woods and trees for camouflage.

Parachute length and width: Measurements are: Head to neck (length-width) 14.3-6.2; abdomen (length-width) 47.4-11; forelimb anterior (length-width) 17.5-5.1; forelimb posterior (length-width) 17-3.9; hindlimb anterior (length-width) 10.9-4.7; hindlimb posterior (length-width) 22.7-3.8; 21 lobes of parachute in tail, first segment (length-width) 5-3.4 and last segment (length-width) 14.6-3.7.

Located in the southeast of the country, Bandarban District is a global biodiversity hotspot of the Indo-Malayan region (Nishat et al. 2002), although the forest vegetation has been degraded by settlers, local inhabitants and others (IRG 2012). We believe that more new species can be found if proper effort is given, however, the richest biodiversity zone also attracts organized poachers to traffic wildlife resources, timber and illegal drugs. The discovery of the lizard species indicates the probability of getting more novel species in this area. We suggest more research work to expand our knowledge and strictly manage the diversity of the zone with the leadership of the Bangladesh Forest Department.

References

- Brown, R.M. (1999).** New species of parachute gecko (Squamata: Gekkonidae: genus *Ptychozoon*) from northeastern Thailand and central Vietnam. *Copeia* 990–1001. <https://doi.org/10.2307/1447974>
- Brown, R.M., J.W. Ferner & A.C. Diesmos (1997).** Definition of the Philippine Parachute Gecko, *Ptychozoon intermedium* Taylor 1915 (Reptilia: Squamata: Gekkonidae): redescription, designation of a neotype, and comparisons with related species. *Herpetologica* 53(3): 357–373.
- Grismer, L.L., P.L. Jr. Wood, M.K. Thura, M.S. Grismer, R.M. Brown & B.L. Stuart (2018).** Geographically structured genetic variation in *Ptychozoon lionotum* (Squamata: Gekkonidae) and a new species from an isolated volcano in Myanmar. *Zootaxa* 4514(2): 202–214. <https://doi.org/10.11646/zootaxa.4514.2.4>
- International Resources Group (IRG) (2012).** *Integrated Protected Area Co-Management (IPAC): State of Bangladesh's Forest Protected Areas 2010*. Nishorgo Network, USAID, 35pp.
- The IUCN Red List of Threatened Species (IUCN) (2018).** *Ptychozoon lionotum*: e.T177831A103308608. Downloaded on 30 September 2020. <https://doi.org/10.2305/IUCN.UK.2018-2.RLTS.T177831A103308608.en>
- Nishat, A., S.I. Huq, S.P. Barua, A.H.M.A. Reza & A.M. Khan (2002).** *Bio-ecological zones of Bangladesh*. The World Conservation Union (IUCN), Dhaka, Bangladesh, 141pp.
- Pawar, S.S. & S.Biswas (2001).** First record of the Smoothbacked Parachute Gecko *Ptychozoon lionotum* Annandale, 1905 from the Indian Mainland. *Asiatic Herpetological Research* 9: 101–106.
- Uetz, P., P. Freed & J. Hošek (eds.) (2020).** The Reptile Database. <http://www.reptile-database.org>, accessed on 25 September 2020.
- Wood, P.L., X. Guo, S.L. Travers, Y.C. Su, K.V. Olson, A.M. Bauer, L.L. Grismer, C.D. Siler, R.G. Moyle, M.J. Andersen & R.M. Brown (2020).** Parachute geckos free fall into synonymy: Gekko phylogeny, and a new subgeneric classification, inferred from thousands of ultraconserved elements. *Molecular Phylogenetics and Evolution* 146: 106731. <https://doi.org/10.1016/j.ympev.2020.106731>





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Articles

Status of Nahan's Partridge *Ptilopachus nahani* (Dubois, 1905) (Aves: Galliformes: Odontophoridae) in Uganda

– Eric Sande, Sisiria Akoth, Ubaldo Rutazaana & William Olupot, Pp. 17063–17076

Fish diversity in streams/rivers of Kalakad-Mundanthurai Tiger Reserve, Tamil Nadu, India

– K. Kannan & J.A. Johnson, Pp. 17077–17092

Gastrointestinal helminth and protozoan infections of wild mammals in four major national parks in Sri Lanka

– Chandima Sarani Sepalage & Rupika Subashini Rajakaruna, Pp. 17093–17104

Review

Appraising carnivore (Mammalia: Carnivora) studies in Bangladesh from 1971 to 2019 bibliographic retrieves: trends, biases, and opportunities

– Muntasir Akash & Tania Zakir, Pp. 17105–17120

Communications

Diversity of scorpions (Arachnida: Scorpiones) in Polonnaruwa Archaeological Reserve, Sri Lanka

– Kumudu B. Wijesooriya, Lakshani S. Weerasekara & Kithsiri B. Ranawana, Pp. 17121–17128

A faunistic survey of tiger beetles (Coleoptera: Carabidae: Cicindelinae) in Chakrashila Wildlife Sanctuary and adjoining riverine ecosystem in Assam, India

– Kushal Choudhury, Chandan Das & Amar Deep Soren, Pp. 17129–17137

Occurrence of the *Aporrectodea caliginosa caliginosa* (Savigny, 1826) (Annelida: Clitellata: Haplotaxida) from Kashmir Valley, Jammu & Kashmir, India

– Ishtiyahq Ahmed Najjar, Anisa B. Khan & Abdul Hai, Pp. 17138–17146

Short Communications

Avian congregation sites in the Gulf of Kachchh, Gujarat, India

– Jigar D. Joshi, Sandeep B. Munjpara, Kinjal Joshi, Harshad Salvi & R.D. Kamboj, Pp. 17147–17152

Checklist of brachyuran mangrove crabs of Kerala, India

– Kurian Mathew Abraham & Apreshgi Kolothuthara Prakasan, Pp. 17153–17160

Notes

A new country record of Smooth-backed Gliding Gecko *Gekko lionotum* (Annandale, 1905) (Squamata: Gekkonidae) from Bangladesh

– M. Rashedul Kabir Bhuiyan, M. Fazle Rabbe, Mohammad Firoj Jaman, Ananda Kumar Das & Samiul Mohsanin, Pp. 17161–17164

***Amblyomma gervaisi* (Ixodida: Ixodidae: Amblyomma) infestation in a Rat Snake from northwestern Himalayan region: a case study**

– Aman D. Moudgil, Ankur Sharma, Adarsh Kumar, Amit Singla & Surender Bansal, Pp. 17165–17167

Parasitic enteritis in the free-ranging Common Myna *Acridotheres tristis* (Aves: Passeriformes: Sturnidae)

– Rakesh Kumar, Aman Dev Moudgil, Sameeksha Koundal, Rajendra Damu Patil & Rajesh Kumar Asrani, Pp. 17168–17170

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