A NEW LUPEROSAURUS (SQUAMATA: GEKKONIDAE) FROM THE SIERRA MADRE OF LUZON ISLAND, PHILIPPINES

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ABSTRACT. – We describe a new species of Luperosaurus from the Sierra Madre Mountain Range of northern Luzon Island, Philippines. Luperosaurus kubli, new species, is distinguished from all Philippine Luperosaurus by the combination of its large body size (105.4 mm for the holotype), reduced interdigital webbing, cutaneous expansions on limbs limited to only the posterior margins, and by the complete absence of ornate dorsal body tubercles and enlarged scales on the lateral edges of the tail. Because the new species shares features with members of both Luperosaurus and Gekko, we compare it to both genera, and comment on characters shared by Philippine species in these genera. Luperosaurus kubli is distinguished from all Philippine Gekko by the combination of a large body size and relatively short, stout, limbs, presence of cycloid, juxtaposed dorsals, and undifferentiated ventrals, the presence of interdigital webbing, and by the absence of dorsal tubercles, enlarged subcaudal scales, and enlarged postmentals.

KEY WORDS. – Philippines; Luzon Island; Sierra Madre Range; new species; Luperosaurus; parachute geckos.

INTRODUCTION

Philippine gekkonid taxa include the genera Gekko (9 species) Hemidactylus (4), Hemiphyllodactylus (1), Cosymbotus (1), Cyrtodactylus (4), Lepidodactylus (6), Gehyra (1), Pseudegko (4), Ptychozoon (1), and Luperosaurus (5) (Taylor, 1922; Brown & Alcala, 1978; Gaulke et al., in press). Brown & Alcala (1978), Russell (1979), and Brown et al. (2000a) commented on the lack of definitive characters distinguishing the genera Luperosaurus and Gekko. Most authors have used the name Luperosaurus to refer to forest species with (1) small to moderate body size and stout limbs; (2) moderate to extensive interdigital webbing; (3) pronounced cutaneous expansions bordering the anterior and posterior edges of the limbs; (4) enlarged, irregular, often ornate, tubercles on dorsolateral portions of the body and tail; (5) small, cycloid, juxtaposed scales completely encircling the tail (enlarged subcaudals absent); (6) chin shields small or reduced (differentiated postmentals absent); and (7) body scales cycloid, juxtaposed, nonimbricate, and undifferentiated between dorsal and ventral surfaces. In contrast, the name Gekko has been applied to Philippine species that possess (1) moderate to large body size and longer, more slender limbs; (2) near or complete absence of interdigital webbing; (3) a lack of cutaneous expansions, save for ventrolateral adipose folds and very slight expansions bordering the posterior margins of the hind limbs; (4) dorsal tuberculate to conical scales enlarged and arranged in longitudinal rows; (5) enlarged, imbricate subcaudals present; (6) differentiated postmentals enlarged, slender, and elongate; and (7) scales of dorsum between tubercle rows minute, non-imbricate, and distinct from the enlarged, imbricate scales of the venter (Taylor, 1922; Brown & Alcala, 1978; Russell, 1979; Brown et al., 2000a).
Philippine members of the genus *Luperosaurus* include five endemic species (*L. cumingii*, *L. joloensis*, *L. macgregori*, *L. palawanensis*, and an undescribed species; Brown & Diesmos, 2000; Brown et al., 2000a; Gaulke et al., in press). Of the Philippine species of the genus *Gekko*, there are seven endemic species (*G. mindorensis*, *G. porosus*, *G. romblon*, *G. palawanensis*, *G. gigante*, *G. enatkelleri* and *G. athymus*; Taylor, 1922; Brown & Alcala, 1978; Rösler et al., 2006), two species shared with other Southeast Asian countries (*G. gecko* and *G. monarchus*; Smith, 1935; Wermuth, 1965; Manthey & Grossmann, 1997), and one species (*G. hokouensis*) of doubtful provenance that may have been erroneously included in the country’s gekkonid fauna (Brown & Alcala, 1978; Ota et al., 1989).

Several additional Philippine gekkonid taxa presently await description, including a large-bodied form represented thus far by only a single, highly distinct specimen from the forests of the northern Sierra Madre Mountain Range of Luzon Island (Fig. 1). Although the new species has some characteristics typical of *Luperosaurus* and others reminiscent of *Gekko*, we assign it to the former genus on the basis of the overwhelming number of character states shared with other Philippine members of the genus *Luperosaurus* (Brown et al., 2000a).

The single specimen was collected in 2003, and despite three near-continuous years of fieldwork in the area conducted by our colleagues and us (Brown et al., 1999; 2000b, 2000c; M. Duya, pers. comm.), no additional specimens have been forthcoming. Due to the low probability of obtaining further specimens and because a lack of biodiversity information can compound the conservation crisis of forest destruction in the Sierra Madres (Mallari & Jensen, 1993; van den Top, 2003; Danielsen et al., 1994; van Weerd et al., 2004), we are compelled to describe the new species on the basis of the single highly distinctive specimen.

### MATERIAL AND METHODS

We scored data from fluid-preserved specimens deposited in museum collections (under Acknowledgments). Sex was determined by inspection of gonads when possible or by scoring of prominent secondary sexual characteristics (Brown et al., 1997, 2001a; Brown 1999) when dissection was not possible. Measurements (to the nearest 0.1 mm) were taken with Fowler digital calipers following character definitions by Ota & Crombie (1989), Brown et al. (1997) and Brown (1999). Character abbreviations include: the number of supralabials (SUL); infralabials (IFL); circumorbitals (CO); differentiated preanofemoral pore-bearing scales (PS); midbody scales (MBS); vertebrae (VS); tail annuli (TA); subcaudals (SC); snout-to-vent length (SVL); tail length (TL); head length, (HL); head width (HW); head depth (HD) snout length (SNL); eye diameter, (ED); eye-narial distance (END); tympanic annulus diameter (TAD); inter-narial distance (IND); inter-orbital distance (IOD); axilla–groin distance (AGD); femur length (FL); tibia length, (TBL); toe I length (TIL); toe IV length (TIVL); tail width (TW); and tail height (TH).

### TAXONOMY

*Luperosaurus kubli*, new species

(Figs. 2–3)

**Material examined.** – Holotype: PNM 9156 (I. L. Osbucan field number 3-024), adult male; 900 m above sea level, Mt. Lataan, western slopes of Sierra Madre Range, Barangay Disimungal, Municipality of Nagtipunan, Quirino Province, Luzon Island, Philippines (16°20.6’N, 121°44.0’E), coll. Edmund de Rico, 14 Mar. 2003.

**Diagnosis.** – Although the new species somewhat blurs the distinction between our concepts of the genera *Luperosaurus* and *Gekko* (as defined by Brown & Alcala, 1978; Russell, 1979; and Brown et al., 2000a) we refer it to *Luperosaurus* by virtue of (1) its possession of a robust body and stout limbs; (2) interdigital webbing between all adjacent fingers and toes; (3) minute cutaneous folds bordering the posterior edge of the forelimb and a moderate flap on the posterior edge of the hind limbs; (4) small cycloid scales encircling the tail (enlarged, differentiated subcaudals absent); and (5) the absence of enlarged or elongate postmentals. However, we recognize the phenotypic similarity between some members of the genus *Luperosaurus* (*L. kubli*, *L. palawanensis*, and *L. macgregori*) and members of the genus *Gekko*. Therefore,
we diagnose the new species from the Philippine members of the genus *Gekko* (below; and Brown et al., 2000a).

*Luperosaurus kubli* most closely resembles *L. macgregori*, and to a lesser extent, *L. palawanensis*, due to the presence of cycloid, juxtaposed, non-imbricate body scales, the absence of dorsal and dorsolateral ornamental tubercles, possession of a moderate cutaneous expansion on the posterior margins of the hind limbs and only slight expansion on the posterior margin of the forelimbs, slight interdigital webbing, and low preanofemoral pore-bearing scale count (Brown & Alcala, 1978; Brown et al., 2000a). However, *L. kubli* differs from all Philippine *Luperosaurus* in having a large body size (SVL = 105.4 mm vs. 61–82.7 in *L. cumingii*; 57.3–58.9 in *L. macgregori*; 43.7–52.0 in *L. palawanensis* and 27.5–32.4 in *L. joloensis*) and it further differs from *L. cumingii*, *L. palawanensis*, and *L. joloensis* by lacking ornate dorsal and/or dorsolateral body tubercles. The new species differs further from *L. macgregori* by the absence (vs. presence) of enlarged lateral caudal tubercles, a greater number of Toe I and Toe III scanners (*L. kubli*: 12 and 16, respectively; *L. macgregori*: 10 or 11 and 12–14, respectively), and by having fewer infralabials (*L. kubli*: 12 or 13; *L. macgregori*: 14–16).

*Luperosaurus kubli* differs further from *L. cumingii* and *L. joloensis* by the lesser extent of interdigital webbing (toes 1/6 to 1/4 webbed vs. 1/2 to 2/3 in these species). Both *L. cumingii* and *L. macgregori* possess preanofemoral pore-bearing scale count ranges that overlap with that of *L. kubli* (15–20 in *L. cumingii* and 16–18 in *L. macgregori*) but those of *L. joloensis* and *L. palawanensis* do not (28–32 and 30–31, respectively).

*Luperosaurus kubli* differs from all known Philippine species of *Gekko* by the near uniform presence of cycloid, juxtaposed, non-imbricate scales covering the body (vs. minute to moderately enlarged scales on dorsum and enlarged, subimbricate to imbricate scales covering the venter in *Gekko*). *Luperosaurus kubli* also lacks elongate postmentals (vs. present in all Philippine species except *G. gecko*) as well as enlarged imbricate subcaudal scales (vs. present in all Philippine *Gekko* species). *Luperosaurus kubli* and *G. athymus* completely lack dorsal tubercles; in all other Philippine *Gekko*, dorsal tubercles are present. *Luperosaurus kubli* has a lower preanofemoral pore-bearing scale count than any Philippine *Gekko* (n=16; vs. 22–26 in *G. athymus*; 25–45 in *G. monarchus*; 46–60 in *G. mindorensis*; 54–66 in *G.

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**Fig. 2.** *Luperosaurus kubli*, holotype (PNM 9156; adult male, SVL = 104.5 mm): A, dorsal view of head, with snout tilted forward 10°; B, lateral view of head; C, ventral view of head; D, palmar surface of right manus.
Description of holotype. – (Figs. 2–3; adult male). Habitus robust, limbs stout and short, tail relatively short; head at widest point (Fig. 2A) significantly wider than (1.3 times) body at widest point (Fig. 3); anterior margins of limbs smooth, lacking cutaneous flaps or dermal folds; posterior margin of forelimbs with minute cutaneous fold (≤ 1.0 mm); posterior margins of proximal (femoral) segment of hind limbs with moderate, 2.0–2.5 mm wide cutaneous expansion; distal (tibial) half of posterior margins of hind limbs with minute cutaneous flap (≤ 1.0 mm); cutaneous expansions with undifferentiated, minute scales on dorsal and lateral surfaces.

Head large, characterized by hypertrophied temporal and adductor musculature; snout subelliptical, rounded at tip in dorsal and lateral aspect (Fig. 2A, 2B); HW 83.5% of HL and 21.7% of SVL; SNL 52.8% of HW and 44.1% of HL; dorsal surfaces of head somewhat heterogeneous, with pronounced concave postnasal, prefrontal, interorbital, and parietal depressions; transverse parietal crest immediately posterior to orbits, raised and pronounced; auricular opening parietal depressions; transverse parietal crest immediately posterior to orbits, raised and pronounced; auricular opening puntiform, obliquely ovoid; tympanum deeply sunken; orbits large, their dorsal boundary the result of highly pronounced supraorbital crests; eye large, pupil vertical, its posterior margin wavy (Fig. 2B); TAD 23.8% of ED; limbs stout and relatively short, femoral segments of hind limbs especially robust; TBL 14.8% of SVL, 81.2% of FL.

Rostral large, rectangular, twice as broad as high, with no dorsomedial depression or groove; nostril surrounded by rostral, the first labial, an enlarged subtriangular supranasal, and two smaller postnasals; supranasals separated by a single internasal; internasal azygous, pentagonal; two slightly enlarged cycloid scales follow postnasals along lateral margins of internasal (Fig. 2A, 2B); supralabials 12/13 (L/ R; 8–13 subocular), bordered dorsally by one row of slightly differentiated snout scales; infralabials 13/12, bordered ventrally by 4 rows of only slightly differentiated chin scales (twice the size of gular scales); postorictal scales slightly enlarged, 2–3 times the size of scales of temporal region; mental scale triangular, followed by one pair of only slightly enlarged postmentals, and five rows of scales decreasing in size until they become undifferentiated from gular scales; remainder of undifferentiated throat scales very small, round, nonimbricate, juxtaposed (Fig. 2C); dorsal cephalic scales round to oval, nonimbricate, convex to granular; undifferentiated head scales irregularly convex, reducing in size posteriorly by interorbital region and becoming smaller and less granular in the temporal and parietal regions; palpebras slightly larger than scales in adjacent frontal region; nuchals granular, strongly convex, continuously grading into enlarged dorsals; dorsals enlarged, round, each separated by interstitial granules, giving the appearance under magnification of a “Star of David” arrangement; throat and chin scales increasing greatly in size, becoming slightly imbricate in gular and pectoral regions, and continuing to increase in size through ventral abdomen where they become sub- to non-imbricate and juxtaposed; cephalic tubercles and spines absent; 42/44 circumorbitals, undifferentiated except for very slight dorsolateral transverse elongation and modification into slight, fringe-like points, projecting into orbit in the cases of a few scales; 34 interorbital scales.

Axilla-groin distance 48% of SVL; undifferentiated dorsal body scales round to hexagonal, nonimbricate, smaller in vertebral region, larger laterally; each dorsal with 6–8 minute surrounding interstitial granules; 116 transverse midbody dorsals; scales on dorsal surfaces of limbs enlarged, flat to convex, juxtaposed to subimbricate, heterogeneous in size with interspersed enlarged scales surrounded by markedly smaller scales; scales on dorsal surfaces of manus and pes (on both digits and interdigital webbing) similar to dorsal limb scales; ventral body scales nonimbricate to subimbricate, much larger than lateral or dorsal body scales; imbricate ventrals.

Sixteen continuous dimpled scales in the preanofemoral pore-bearing series, arranged in a non-bowed, widely obtuse, inverted “V” formation; preanofemorals preceded by one similarly enlarged but nondimpled scale rows; followed by slightly reduced scales along medial body axis to vent; scales lateroposterior to preanofemoral series (i.e., along ventroposterior surfaces of hind limb) reduce in size sharply to minute scales under the cutaneous expansion of the posterior edge of the hind limb.

Digits widely dilated and covered on palmar/plantar surfaces by wide, bowed scanners (Fig. 2D); penultimate 2 or 3 scanners deeply notched (not divided); all digits webbed slightly, with web extending 1/5–1/4 from base and ending below the dilated hyperextensible portions of digits; subdigital scanners of manus: 11/12, 12/12, 17/16, 16/16, and 11/12 on left/right digits I–V respectively; pes: 12/12, 13/12, 15/15, 15/15, and 13/13 on left/right digits I–V respectively; all digits clawed but first; first (inner) with greatly reduced minute claw like scale; remaining terminal claw-bearing phalanges compressed, with large recurved claws, rising free at distal end, extending well beyond dilated portion of digit.

Tail base bordered by a single, greatly enlarged cloacal spur on each side of vent; postcloacal swellings pronounced; Tail short, 60.7% of SVL (including regenerated 14 mm tip); TH...
Table 1. Distribution of selected diagnostic characters in *Luperosaurus kubli* and the remaining species of *Luperosaurus*. Bilaterally symmetrical characters are presented for the right side of each specimen. Measurements are presented in mm and all specimens (with the exception of the *L. joloensis* paratype and two hatchling *L. cumingii* [measurements excluded]) are considered adults. Sources of data include (1) Brown et al., 2000a, (2) Ota et al. (1996), (3) Russell (1979a), (4) Brown and Alcala (1978), and (5) this study.

<table>
<thead>
<tr>
<th>Character</th>
<th><em>kubli</em></th>
<th><em>cumingii</em></th>
<th><em>macgregori</em></th>
<th><em>palawanensis</em></th>
<th><em>joloensis</em></th>
<th><em>iskandari</em></th>
<th><em>browni</em></th>
<th><em>brooksi</em></th>
<th><em>yasumai</em></th>
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</thead>
<tbody>
<tr>
<td>n</td>
<td>1</td>
<td>4</td>
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<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Snout-to-vent length</td>
<td>105.4</td>
<td>61.0–82.7*</td>
<td>57.4–58.9</td>
<td>43.7–52.0</td>
<td>27.5–32.4</td>
<td>69.4</td>
<td>60.0–66.5</td>
<td>58.5</td>
<td>38.9</td>
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<td>Body shape</td>
<td>robust</td>
<td>robust</td>
<td>robust</td>
<td>robust</td>
<td>robust</td>
<td>elongate</td>
<td>elongate</td>
<td>elongate</td>
<td>robust</td>
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<td>Axilla-groin distance</td>
<td>50.8</td>
<td>40.6</td>
<td>30.1–31.8</td>
<td>19.1–21.1</td>
<td>14.2</td>
<td>37.0</td>
<td>33.1–33.4</td>
<td>31.0</td>
<td>19.0</td>
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<td>Subcliral tubercles</td>
<td>–</td>
<td>–</td>
<td>+, –</td>
<td>+, –</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>–</td>
<td>–</td>
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<td>Interparanasals contacting rostral</td>
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<td>2</td>
<td>1–3</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
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<td>Lateral tail tubercles</td>
<td>–</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>+</td>
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<td>5</td>
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<td>5</td>
<td>5–6</td>
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<td>1.2</td>
<td>1.3–1.4</td>
<td>1.6</td>
<td>1.6–1.7</td>
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<td>0.75–0.87</td>
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<td>0.30</td>
<td>0.77</td>
<td>0.65–0.80</td>
<td>0.72</td>
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<tr>
<td>No. cancers on toe I</td>
<td>12</td>
<td>11–14</td>
<td>10–11</td>
<td>8–9</td>
<td>9–11</td>
<td>10</td>
<td>11–13</td>
<td>12</td>
<td>8</td>
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<td>No. cancers on toe III</td>
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<td>13–16</td>
<td>12–14</td>
<td>9–13</td>
<td>12–13</td>
<td>17–18</td>
<td>16–19</td>
<td>16</td>
<td>7</td>
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<tr>
<td>Extent web between digits III and IV of pes</td>
<td>1.6–1/4</td>
<td>1/2–3/4</td>
<td>1/5–1/3</td>
<td>1/5–1/4</td>
<td>15–2/3</td>
<td>2/3–3/4</td>
<td>1/2–3/3</td>
<td>3/5</td>
<td>1/2–3/4</td>
</tr>
<tr>
<td>Auricular opening</td>
<td>oval</td>
<td>moderately</td>
<td>oval,  moderate</td>
<td>oval, oblique small</td>
<td>large subicular</td>
<td>narrow oblique vertical</td>
<td>oval,  oblique small</td>
<td>round</td>
<td>oval,  round</td>
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<tr>
<td>Penultimate scorers</td>
<td>deeply</td>
<td>notched</td>
<td>deeply</td>
<td>notched</td>
<td>a few</td>
<td>bowed</td>
<td>deeply</td>
<td>bowed</td>
<td>bowed</td>
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<tr>
<td>Dorsal body scales</td>
<td>round,</td>
<td>convex, granular</td>
<td>round, convex, granular</td>
<td>round, convex, granular</td>
<td>round, convex, granular</td>
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<tr>
<td>Dorsal tubercles</td>
<td>–</td>
<td>strongly convex</td>
<td>a few, convex</td>
<td>a few, spinose</td>
<td>a few, spinose</td>
<td>many, spinose</td>
<td>many, flat</td>
<td>many, convex</td>
<td>many, spinose</td>
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<tr>
<td>Ventrolateral body tubercles</td>
<td>–</td>
<td>a few, convex</td>
<td>a few, convex</td>
<td>a few, spinose</td>
<td>a few, spinose</td>
<td>many, spinose</td>
<td>many, flat</td>
<td>many, convex</td>
<td>many, spinose</td>
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<tr>
<td>Ventral subimbricate</td>
<td>–</td>
<td>granular</td>
<td>small, granular</td>
<td>large, flat, subimbricate</td>
<td>small, flat to convex** **</td>
<td>large, flat, subimbricate</td>
<td>large, flat, subimbricate</td>
<td>large, flat, subimbricate</td>
<td>large, flat, subimbricate</td>
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<td>Anteriormost chin</td>
<td>slightly enlarged</td>
<td>small</td>
<td>small</td>
<td>slightly</td>
<td>slightly</td>
<td>small</td>
<td>small</td>
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<tr>
<td>Anterior forelimbs expansions</td>
<td>–</td>
<td>wide</td>
<td>narrow</td>
<td>moderate</td>
<td>wide</td>
<td>moderate</td>
<td>wide</td>
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<tr>
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<td>wide</td>
<td>moderate</td>
<td>–</td>
<td>moderate</td>
<td>wide</td>
<td>narrow</td>
<td>narrow</td>
<td>–</td>
</tr>
<tr>
<td>Anterior hindlimbs expansions</td>
<td>–</td>
<td>narrow</td>
<td>–</td>
<td>–</td>
<td>narrow</td>
<td>narrow</td>
<td>narrow</td>
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<td>Posterior hindlimbs expansions</td>
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<td>(1, 2)</td>
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</table>

*Based on CAS 182570 and TNHC 61910; **Counted as all enlarged labial scales to point below posterior corner of eye; ***based on MCZ 26118;
Colouration in life. – Dorsal surfaces of body and limbs light tan with dark brown blotches and transverse crossbars; head pale yellow with dark brown blotches and postcrial bars; labials alternating dark brown and bright yellow; iris grey; ventral surfaces of head light grey to white; oblique inguinal marking bright white. (From photographs of holotype before preservation).

Ecology and Natural History. – We have no information on microhabitat preference, abundance and distribution, or reproduction in the new species. The single specimen was first observed gliding/parachuting from the canopy (estimated 8–15 m) and was collected where it landed at 1.5 m above the ground on the trunk of a large tree (70–90 cm dbh). When captured by hand, the animal attempted to escape by twisting and biting the collector. For a description of the forests of the Sierra Madres, see Danielsen et al. (1994).

Etymology. – The specific epithet is chosen from Tagalog (traditional Filipino) term for hidden, unknown, or concealed, in reference to the secretive habits of this apparently rare forest species, and to the uncertain systematic affinities of the genus Luperosaurus.

(continues)
the only way to support or refute the conjecture presented here.

Parachuting locomotion is well known in the genus Ptychozoon (Brown et al., 1997) but has seldom been noted in the genus Luperosaurus. Although taxonomists have noted cutaneous expansions bordering the limbs of Luperosaurus species (Boulenger, 1885; Stejneger, 1907; Russel, 1979; Ota et al., 1996; Brown et al., 2000a), few biologists have published observations of the parachuting behavior of species of the genus Luperosaurus. In addition to our observations reported here, we note that ancillary observations of collectors of L. cf. cumingii (Gaulke et al., in press) involve accounts of parachuting and the capture of Luperosaurus in mist nets set for bats (P. Heideman & L. Heaney, pers. comm.). Together, these observations suggest to us that species of Luperosaurus naturally may glide or parachute from elevated perches in the same way that has been reported for species of Ptychozoon (Brown et al., 1997, and citations therein).

The discovery of another species of Luperosaurus from the largely unexplored Sierra Madres of Luzon is not surprising. This vast isolated mountain range is expected to harbor endemics and high levels of undocumented biodiversity (R. Brown et al., 1999, 2000b, 2000c; W. Brown et al., 1997, 1999). The repeated discovery of new species in this geologically distinct and zoogeographically unique component of Luzon emphasizes the immediate need for our ongoing comprehensive herpetological inventory of the northeastern Philippines.

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LITERATURE CITED


APPENDIX

Comparative material examined

*Luperosaurus cumingii*: Philippines, Luzon Isl., Camarines Sur Province, Municipality of Caramoan, Anuling Mountain; UF 77829; Albay Province, Municipality of Tiwi, Barangay Banzhaw, Sitio Purok 7, Mt. Malinao, 550 m above sea level: TNHC 61910; *Luperosaurus cf. cumingii*: Philippines, Negros Isl., Negros Oriental Prov., Municipality of Valencia, Lake Balinsasayao: SUR 2211; Saksak Cr., Mt. Cuernos de Negros, “Camp Lookout”: CAS-SU 24394–95; Negros Isl., Lake Balinsasayao: CAS 182570; *L. jolensis*: Philippines, Mindanao Isl., “Cotobato Coast”: MCZ 26118; Jolo Isl., Siel Lake: CAS 60675 (paratype); *L. macroderes*, Philippines; Calayan Isl.: CAS-SU 6263 (paratype); Babuyan Island group., Barit Isl. (near Fuga Isl.): USNM 508306–508308; *L. palawanensis*, Philippines, Palawan Isl., Thumb Peak, about 7 km NW of Iwahig: CAS 136740 (paratype); Palawan Isl., Malatag River, SE of Thumb Peak, about 3.5 km NW of Iwahig: CAS 134207 (holotype); *L. brownii*, Malaysia, peninsular Malaysia, Selangor, Ulu Gombak forest reserve, 35 km N of Kuala Lumpur: FMNH 185106 (holotype); Malaysia, Sarawak (Borneo Isl.), Lambir National Park: KUZ 12835 (*L. serraticaudus* holotype); *P. rhacophorus*, Malaysia, Sabah, Mt. Kinabalu: KUZ 35118; *L. iskandari*, Indonesia, Sulawesi Is., Propinsi Sulawesi Tengah (Central Sulawesi Province), Kabupaten Banggai, Kecamatan Pagimana, Kampung/Desa Siuna, approximately 4 km E of Dusun Satu (Region 1), Mt. Tontopita (0°44.5'S, 123°01.1'E); *L. yasumai*, Indonesia, Kalimantan (Borneo Isl.), Bukit Soeharto Experimental Forest, 45 km SSW of Samarinda: KUZ 30408 (holotype); *L. brooksi*, Indonesia, Sumatra Isl., Benkuelen, Lebong Tandai: BMNH 1920.1.16.2 (holotype); *Gekko hokouensis*, “Philippines” FMNH 17812 (*L. amissus* holotype); *Gekko gigante*, Philippines, Iloilo Prov., Gigante South Isl., Tantangan: CAS 124315–17 (paratypes); SW part Gigante Norte Isl.: CAS 124866–67 (Paratypes); *Gekko atymus*, Philippines, Palawan Isl., Palawan Prov., about 10 km WSW of Iwahig: CAS 137677; about 8.9 km S of Balico: CAS-SU 23119 (holotype); about 20 km W of Iwahig: CAS-SU 23121 (paratype); *Gekko pororus*, Philippines, Bataanes Prov., Bataanes Isls., Itbayat Isl.: CAS 60526 (holotype); *Gekko mindorensis*, Philippines s, Negros Isl., Negros Oriental Prov., Himangangpong Cave, Manjayog: CAS-SU 28656–60; *Gekko monorchus*, Philippines, Palawan Isl., Palawan Prov. about 1.5 km. W.S.W. of Iwahig: CAS-SU 28416; about 5 km SSE of Iwahig : CAS-SU 28496; about 7 km WNW of Iwahig: CAS-SU 28554; *Gekko ronblom*, Philippines, Sibuyan Isl., Rombolon Prov., Tacloblo Barrio: CAS 139180–82 (paratypes); *Gekko palawanensis*, Philippines, Palawan Isl., Palawan Prov., about 7 km WNW of Iwahig: CAS 17318; 8 km W of Iwahig: CAS 17319; about 9 km W of Iwahig: CAS 17320–22.