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# *Thrinchostoma* (*Diagonozus*) *asianum* sp. nov.: Discovery of an African Subgenus of Long-malared Halictine Bees from Sumatra, with some Observations on its Oligotrophy to *Impatiens*

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**Abstract** *Thrinchostoma asianum* sp. nov. is described from Sumatra as the first record of the subgenus *Diagonozus* known by four African species. *T. asianum* shares the unusually long lower part of the head with these species but is less differentiated in some features. This species is probably oligo-trophic to *Impatiens korthalsii* flowers.

**Key Words**: *Thrinchostoma* / Halictidae / *Impatiens* / Sumatra

*Thrinchostoma* Saussure is an aberrant Palaeotropic genus of the halictine bees characterized by the long head and mouthparts and by some other features (Michener, 1978b). Its subgenus *Diagonozus* Enderlein is conspicuous by the extremely long malar space, nearly as long as to longer than eye, and has been known by four African species, *bicometes* (Enderlein), *guineense* Blüthgen, *lettow-vorbecki* Blüthgen and *ghesquierei* Cockerell (Blüthgen, 1930; Cockerell, 1932). We found a new *Thrinchostoma* species which should be placed in *Diagonozus*, in primary forests of Sumatran highlands. This species is probably oligotrophic to *Impatiens korthalsii* (Balsaminaceae) (Kato *et al.*, 1991).

## *Thrinchostoma* (*Diagonozus*) *asianum* sp. nov.

The extremely elongate lower half of the male head clearly of the *Diagonozus* type (Figs. 1-5, compare with 6), but distinguished from all four species known from Africa by four male features: (1) Hind trochanter below without process, only mildly elevated subapically (Fig. 12). (2) Apical flagellomeres simple without apical marks and the last segment normal, not flexed (Fig. 7). (3) Pronotum not much elongate, horizontal area medially shorter than ocellar diameter. (4) Vein Tc-2 not strongly angulate (3, 4 also in female).

***Morphometry.*** L, W = maximum length and width, D = minimum distance, $\phi$ = dia-meter (unit = mm); $f$ = female ($n$ = 1), $m$ = male ($n$ = 3; values for these three males are given in the same order for all the characters). Values for a male of *T.* (*Thrinchostoma*) *flaviscapus*

* Requests for reprints should be addressed to M. K.

Blüthgen collected in the same district are given for comparison with symbol *fl*.

Body L (*f* 13.5, *m* 13.4, 13.5, 13.7; *fl* 11.7). Wing L including tegula (*f* 11.2, *m* 11.0, 11.4, 11.0, *fl* 10.0), wing diagonal (= D between *Mcu* bifurcation and inner tip of marginal cell, *f* 5.4, *m* 5.1, 5.2, 5.3, *fl* 4.5).

Head L (*f* 4.6, *m* 4.6, 4.6, 4.6, *fl* 3.4), head W (*f* 3.3, *m* 3.0, 3.1, 3.0, *fl* 3.0), clypealveolar D (*f* 2.8, *m* 2.8, 2.9, 2.9, *fl* 1.8), verticosuborbital D (= D between summit of vertex and suborbital line, *f* 2.6, *m* 2.3, 2.4, 2.4, *fl* 2.3), eye L (*f* 2.3, *m* 2.0, 2.1, 2.1, *fl* 2.0), maximum interorbital D (*f* 2.0, *m* 1.8, 1.8, 1.8, *fl* 1.8), D between outer-lower end of paraocular area (*f* 1.8, *m* 1.3, 1.3, 1.3, *fl* 1.3), clypeus L (*f* 1.6, *m* all 1.8, *fl* 1.1), upper interorbital D (*f* 28, 0.28, 0.32, *fl* 0.28), ocellocular D (*f* 0.40, *m* 0.40, 0.36, 0.36, *fl* 0.4), interocellar D (*f* 0.36, *m* all 0.32, *fl* 0.28), verticorbital L (= tangential L between summit of vertex and supraorbital line, *f* 0.32, *m*, 0.32, 0.28, 0.32, *fl* 0.28), flagellar L (*f* 3.1, *m* 3.5, 3.4, 3.4, *fl* 3.4), scape L (*f* 1.4, *m* 1.1, 1.1, 1.1, *fl* 1.0), flagellomere 1 L (*f* 0.36, *m*, 0.32, 0.32, 0.28, *fl* 0.28), flagellomere 11 L (*f* 0.56, *m* 0.52, 0.48, 0.48, *fl* 0.52), flagellomere 10 L (all 0.32), flagellomere 3 L (*f* 0.28, *m*. 0.30, 0.30, 0.28, *fl* 0.32), flagellomere 2 L (*f*, *m* all 0.28, *fl* 0.32), flagellomere 2 W (all 0.24).

Mesosoma W excluding tegula (*f* 2.8, *m* 2.5, 2.5, 2.8, *fl* 2.2), mesoscutellum L (*f* 1.88 *m* 0.75, 0.81, 0.88, *fl* 0.69), propodeal dorsum L (*f* 0.88, *m* 0.75, 0.81, 0.81, *fl* 0.56), meta-notum L (all 0.44), metasoma W (*f* 3.8, *m* 3.3, 3.4, 3.3, *fl* 2.9).

**Important ratios**: head W:mesosoma W : metasoma W (*f* 1:0.85:1.13, *m* 1:0.86:1.10, *fl* 1: 0.73:0.96), head W : head L (*f* 1:1.38, *m* 1:1.54, *fl* 1:1.13), upper interorbital D : ocellocular D (*f* 1:0.38, *m* 1:0.39, *fl* 1:0.40), clypeus L : clypealveolar L : APL (*f* 1:1.69:1.23, *m* 1:1.63:1.34, *fl* 1:1.56:1.11), interocellar D : ocelloccipital D : verticorbital L (*f* 1:1.11:0.89, *m* 1:1.16:0.96, *fl* 1:1.43:1.00), eye W : gena W (*f* 1:0.48, *m* 1:0.59, *fl* 1:0.50), mesoscutellum L : metanotum L : propodeal dorsum L (*f* 1:0.50:1.00, *m* 1:0.54:0.95, *fl* 1:0.64:0.82), eye L : malar L (*f* 1:0.84,

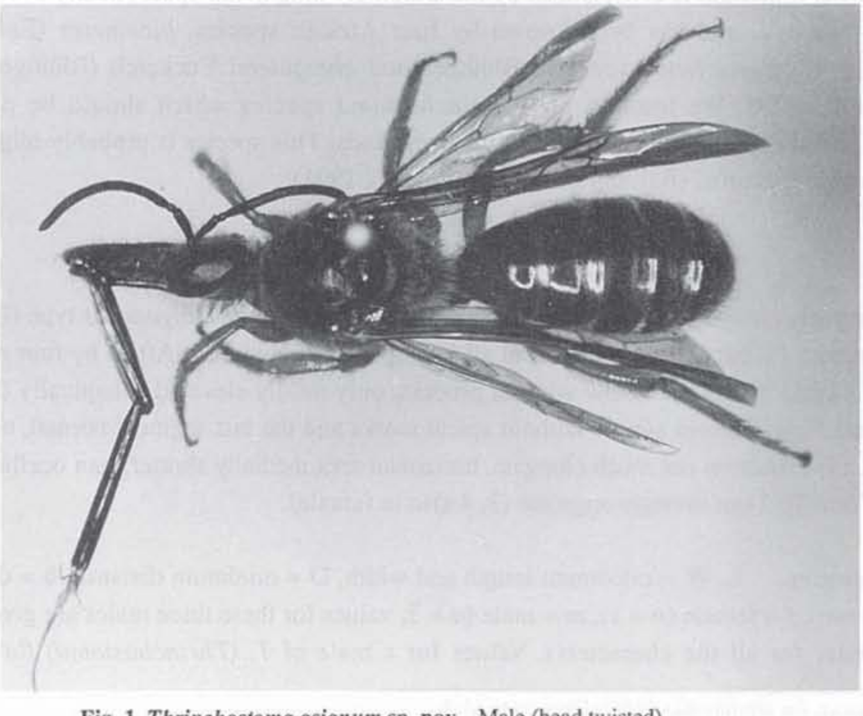
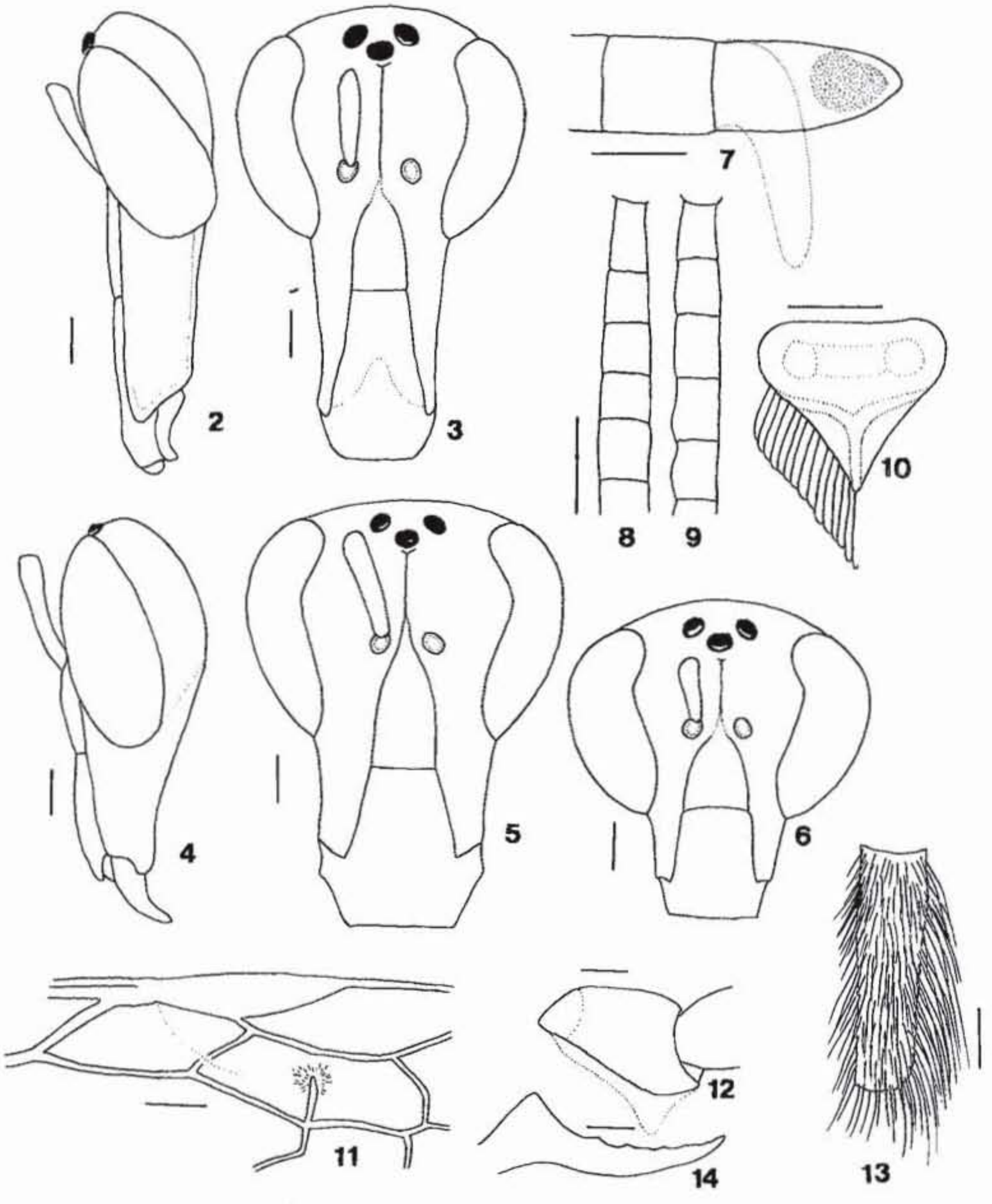
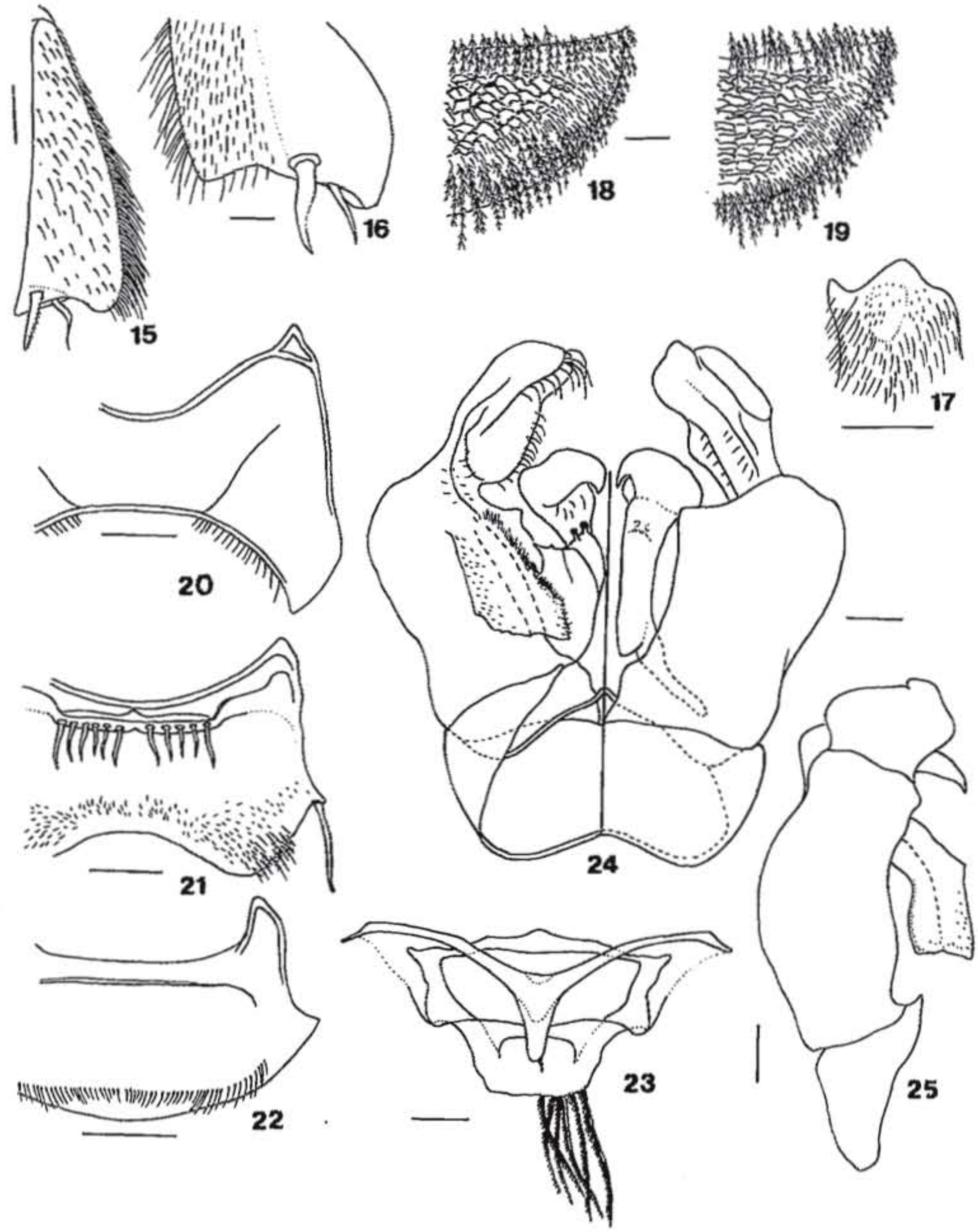


**Fig. 1.** ***Thrinchostoma asianum* sp. nov.** Male (head twisted).




**Figs. 2-14.** ***Thrinchostoma asianum*** **sp. nov. and** ***T. flaviscapus*** **Blüthgen** (Fig. 6). **2, 3.** Head; lateral and frontal views (male). **4, 5.** Ditto (female). **6.** Head of *T. flaviscapus*, frontal view (male). **7.** Apex of male flagella (underside), dotted area = shiny part, dotted contour = apical flagelomere of *T. bicometes*, modified from Blüthgen (1930). **8, 9.** Basal flagellomeres, female and male (right = upper side). **10.** Female labrum. **11.** Male right wing partly. **12.** Male hind trochanter, dotted contour = trochanter in *T. bicometes* modified from Blüthgen (1930). **13.** Female fore basitarsus (right = outer side). **14.** Inner hind tibial spur (female). Scale = 0.125 mm in Fig. 14; 0.25 mm in Figs 7, 10-13; 0.5 mm in others.




**Figs. 15-25.** ***Thrinchostoma asianum*** **sp. nov.** **15.** Male left hind tibia (upper side). **16.** Ditto (under side, apical part enlarged). **17.** Male basitibial plate (shown with dotted circle). **18, 19.** Propodeal dorsum (male and female). Figs. **20-25.** Male terminalia. **20-22.** Sterna 4-6. **23.** sterna 7, 8. **24.** Genitalia, dorsal (right) and ventral (left) views. **25.** Ditto, right lateral view. Scale = 0.25 mm in Figs 16, 17, 23-25; 0.5 mm in Figs 15, 18, 19, 20-22.

*m*:1.16, *fl* 1:0.44).

**Coloration.** Male: Black, clypeus and metasoma partly dark brown to brown. Apical 1/3 of clypeus triangularly, labrum, mandible except chestnut apex and tegula pale brown. Antenna brownish black, apical flagellomeres frontally brownish. Legs basally dark brown, tibiae and tarsi brown to pale brown. Metasomal terga apically semitransparent. Wings transparent, slightly infuscate, veins and stigma brown. Female: Similar but generally paler;

scutellum, metanotum, mesosomal side, propodeum and metasoma brown. Clypeus entirely pale brown, contrasting with black supraclypeus.

**Pilosity.** Male: Hairs golden yellow, plumose unless specified. Metasomal terga with apical fasciae and laterally directed simple hairs characteristic of most congeners (Michener 1978).

Head: Vertex with simple erect hairs, ±250 μm medially, ±370 μm laterally. Ocellar area and frons above with finer moderately dense hairs (±75 μm), not hiding surface. Face and paraocular area with dense tomentum hiding surface, admixed with sparser, longer (to 250 μm) hairs. Supraclypeus peripherally and clypeus with sparse, simple semierect hairs (300-350 μm). Gena with dense tomentum hiding surface along outer orbit; the tomentum gradually replaced backward and downward by sparser long (300 μm) hairs, attaining 625 μm on hypostoma.

Mesosoma: Tomentum hiding surface on pronotum, mesoscutum peripherally (especially broadly on anterior half), metanotum except posterior area, mesosomal side except mesopleuron, propodeum except dorsum medially.

Longer hairs: Fairly dense, erect, on pronotum (±250 μm); similar but sparser on mesoscutum, not hiding surface. Mesoscutellum and metanotum with similar but apical hairs (500-550 μm). Mesopleuron with semiappressed hairs (200-500 μm). Hairs on propodeal side 500 μm above and 600 μm below; propodeal dorsum, as in other congeners, rather hairy than in other halictines, only medially glabrous (Fig. 18); hairs on apical margin of dorsum and on propodeal declivity erect (±500 μm). Tegula anteriorly with erect or semiappressed hairs (125-200 μm), posterior part broadly glabrous. Legs with simple or vestigially plumose hairs. Hind tibia above sparsely haired (Fig. 15, ±375 μm); posterior fringe to 500 μm, below on posterior 2/3 with dense, fine hairs (Fig. 16, ±250 μm).

Metasoma: Tergum 1 ($T_1$) on slope with sparse, erect, moderately dense hairs (±450 μm), on disc medially with very sparse plumose hairs (150-250 μm), laterally 300-350 μm, denser apically. Apical fasciae of obliquely directed hairs (±25 μm) confined to lateral part. $T_2$ with erected simple hairs (±50 μm) on disc anteriorly; the hairs backward gradually longer (± 200 μm) and semiappressed. $T_3$-$T_5$ similar but hairs gradually denser, stouter. Apical fascia on $T_{2\text{-}4}$ entire, with hairs directed laterally. $T_{5,\,6}$ without apical fascia, with bristle-like hairs (to 450 μm). Sterna 1-3 very sparsely haired. Pilosity on apical sterna as given in structure.

Female: Similar to male. Femoral scopa of the usual halictine type, neither modified nor reduced. Hind tibia anteriorly with sparsely plumose hairs; metasomal fasciae denser; $T_5$ with hairs dense and bristled (to 500 μm). Sterna 2-4 with moderately dense scopa of simple hairs (to 750 μm); some of them apically curved but not properly plumose.

**Structure** (some supraspecific features included). Male: Large and slender. Head (Figs. 2-5, compare with Fig. 6): Seen dorsally gena narrower than eye, distinctly convergent forward. Seen frontally part below eye narrower than 1/2 head width. Eye convex, both inner and outer orbits convergent below. Vertex mildly raised, medially flat, with dense PP (= punctures, ϕ 12-25 μm), IS (interspaces or ratio of their width to puncture ϕ ) < 1.0, partly 1.0-1.5; weakly etched and dully shining. Ocellocular area with PP slightly sparser and IS shiner. Ocellar area slightly raised, below mid ocellus depressed, dull. Frons sculptured as on vertex. Face flat; sculpture hidden by tomentum. Supraclypeus long, convex, with coarse PP (ϕ 40-50 μm), admixed with finer ones (ϕ 10 μm); IS 1.0, smooth, shining. Frontal carina mild; frontal sulcus attaining midocellus. Clypeus very long, peripherally sculptured as on supraclypeus but PP ill defined; median paler part slightly depressed; IS finely tessellate as on apical part. Paraocular area below smooth, shining; epistomal lobe conspicuous. Malar space extremely long, dull, slightly etched posteriorly, apically truncate; anterior angle more projecting (Fig. 1). Hypostoma with finest lineolation. Antenna exceeding mesoscutum; scape attaining mid ocellus (Fig. 3); flagellomeres longer than wide; middle ones below slightly convex (Fig. 9); apical ones without apical marks; the last segment normal, not flexed, below apically smooth, shining, as in some other examined congeners (Fig. 7). Labrum basally mildly convex; apical part triangular, as long as basal part, marginally bristled. Mandible simple, rather straight. Maxillary and labial palpi normal, short, 4- and 6-segmented, respectively; basal segment of labial palpi twice longer than others.

Mesosoma: Pronotum as given above. Mesoscutum anteriorly slightly projecting but not forming truncate vertical lip, medially with homogeneous PP ($\phi$ 25 $\mu$m); IS shining, linear (max. 0.5) but not tending to reticulation. Mesoscutellum submedially slightly convex near base; sculpture as on mesoscutum but IS partly wider, smooth, shining. Mesopleuron hidden by tomentum but densely punctured than reticulated. Propodeal dorsum medially coarsely and irregularly reticulo-areolate, tending to form obscure radiation; propodeal declivity not surrounded with carina. Wings long, distinctly exceeding rather long metasoma. Vein Tc-1 slightly distant from stigma; Tc-2 interrupted anteriorly, accompanied with clear hair mark, medially obscurely angulate outward and mildly thickened there. Recurrent vein 1 either interstitial or received by 2nd submarginal cell, acutely angulate before attaining the cell (Fig. 11). No. of hamuli 4-1-1-4, 4-1-1-3, 4-1-1-3 (*T. flaviscapus*, 5-1-4). Fore and mid legs normal, slender, strigilis of the common *Lasioglossum* type. Hind trochanter normal, not produced below (Fig. 12). Hind tibia of the type peculiar to *Thrinchostoma*, (Figs. 15, 16); anteroapical angle sharply projecting; outer tibial spur microserrate, inner one simple, apically curved. Basitibial plate not well demarcated, represented by smooth elevated area with sparse hairs (Fig. 16). Hind basitarsus and first distitarsal segment weakly fused.

Metasoma: Tergum 1, including very mild submedian elevation, homogeneously finely tessellate and dully shining with sparse PP ($\phi$ 10-20 $\mu$m); postmarginal area lineolate, weakly depressed after elevation. $T_2$ similar but PP denser; sometimes IS = 1.0. $T_{3,4}$ more coriaceous and not shining; submedian elevation obsolete. $T_{5,6}$ similar but tessellation weaker. Sternum 1 and 2 postapically slightly projecting. $S_3$ concave. $S_{4\text{-}6}$ with pointed apodemal lobe. $S_4$ (Fig. 20) with antecosta distinctly incurved; pregradular area wide, glabrous; gradulus medially nearly fusing with apical margin, laterally oblique and abruptly ending; apical margin distinctly incurved, laterally with fine bristles which are longer (to 250 $\mu$m) and weakly plumose laterad. $S_5$ (Fig. 21) with antecosta mildly incurved; pregradular area narrow; gradulus anomalous; median part transverse, thick, issuing "eaves" carrying stout 5-6 spurs (asymmetric in the illustrated male); lateral part strongly bent submedially, weakened laterad; postgradular area apically distinctly incurved with hairs on submarginal area; the hairs short and directed anteriorly on median part, gradually issuing normally, longer laterad (125 $\mu$m) and exceeding apical margin on lateral lobe; lateral angle bearing stout sinuate spur (500 $\mu$m); apical margin medially mildly incurved but seen distinctly curved for transparent median part. $S_6$ (Fig. 22) short with antecosta transverse; pregradular area narrow; gradulus transverse, laterally ending with short curve; postgradular area mildly outcurved apically, but seen transverse for transparent apical part; submarginally with short dense hairs; longer laterad, exceeding margin. $S_7$ (Fig. 23) with median part triangular, apically forming slender process bearing sparse, fine apical bristles. $S_8$ (Fig. 23) trapezoid; apical margin laterally with a few long (to 625 μm), unilaterally plumose bristles.

Genitalia robust (Figs. 24, 25). Gonobase twice wider than long. Gonocoxite robust, wide and hairless, laterally not much deviating from gonobasal outline. Gonostylus massive elongate oval but surface irregularly sculptured. Inner side sparsely haired (max. 125 μm), without apical appendage; basal retrorse lobe wide, flexed medially, apically irregularly truncate, centrally glabrous, peripherally with fine setae, denser along inner margin. Penis valve with a pair of ventrobasal spheroid processes of which stalks are shorter than those of *T. (Thrinchostoma) sjostedi* (Friese) illustrated by Michener (1978b, Fig. 82).

Female: Main differences from male: Head (Fig. 5) below eye distinctly wider; eye less convex; vertex flatter; supraclypeus shorter; medially PP distinctly sparser; IS seen broadly dull and shining. Clypeus shorter, mediolongitudinally depressed; IS smooth, shining medially and apically. Epistomal lobe smaller. Malar area distinctly shorter (Fig. 4), apically less oblique. Antenna attaining mesoscutum; scape exceeding mid ocellus (Fig. 5); flagellomeres shorter but not so as in many other halictines (Fig. 5), below not convex; the last segment apically below less shining. Labrum with basal tubercle more developed; marginal bristles longer and apically curved (Fig. 10).

Mesosoma: IS of mesoscutum and mesoscutellum as narrow as in male but tessellate. Propodeal dorsum less haired and reticulo-areolation arranged more transversely (Fig. 19, possibly showing individual variation). Wing veins similar except Tc-2 complete, not thickened medially and hair mark absent. No. of hamuli 5-1-1-3. Fore basitarsus without basitibial comb, replaced by homogeneously long dense bristles (Fig. 13). Fore and mid femora mildly, and hind femur distinctly ridged basally below as in some other examined congeners. Basitibial plate as in Michener (1978b). Inner hind tibial spur with a strong basal process and vestigial and irregular apical teeth (Fig. 14).

**Specimens examined.** Holotype (♂) and paratypes (1♀2♂) all collected in Airsirah, Solok, Prov. Sumatera Barat, Indonesia in Jan. 1988 all from *Impatiens korthalsii* flowers in primary rain forests. Holotype: ♂ Jan. 8, alt. 800 m, T. Itino (terminalia examined). Paratypes 1♀, Jan. 8, 2♂ Jan. 16, all alt. 950 m, M. Kato. All specimens are to be deposited in Entomological Institute, Faculty of Agriculture, Hokkaido University, Sapporo, Japan.

### *Field observations*

We observed flower visitors on 32 plant species (including seven *Impatiens* species) in natural and disturbed vegetations ranging from lowland to mountain zone in Sumatera Barat on about 30 fine days between Nov. 29, 1987 and Jan. 30, 1988 (Kato *et al.*, 1989). Besides the collected specimens *T. asianum* was observed 16 times (including), all on *I. korthalsii*. This plant species grows on the floor of the mountain rain forest near streamlet. The height of the plants was 10-30 cm and flowers were yellow with long (21.7 ± 2.0 μm), gradually tapering, slightly curved spurs (Fig. 26). We observed that 12 bees flying swiftly near ground visited *Impatiens* flowers and inserted their mouthparts into spurs. At the moment, the hind metasomas of the bees touched androeciums of the flowers, and attachements of pollen there were confirmed for the three bees. *I. korthalsii* flowers were also visited by *Amegilla sumatrana* and *Elaphropoda impatiens* (both Anthophoridae) (Kato *et al.*, 1991).

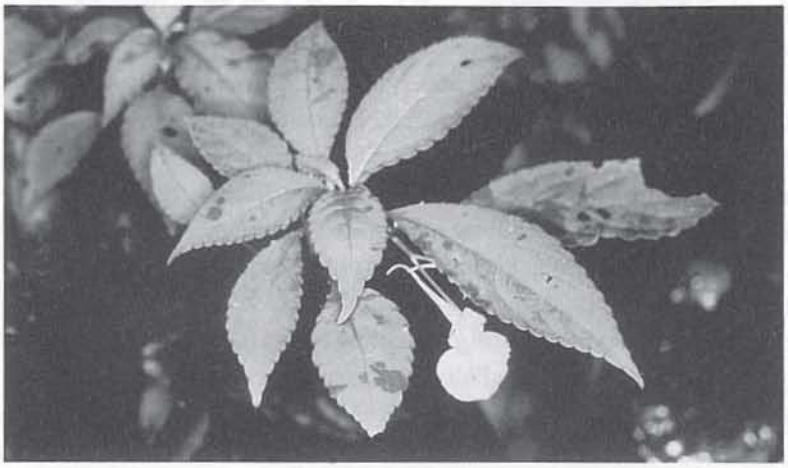


**Fig. 26. *Impatiens korthalsii*,** the floral host plant species of *Thrinchostoma asianum*, flowering in a mountain forest near Airsirah, Padang in Sumatera Barat.

***Systematic notes***

By the large number of species, the diversity of subgenera and the presence of the possibly ancestral subgenus *Eothrinchostoma*, tropical Africa is the center of distribution and the probable area of the origin of the genus. The number of species (excluding forms) is given by Michener (1978b) for each subgenus of the genus *Thrinchostoma*: *Eothrinchostoma* and *Diagonozus* (6 and 4, respectively, all from tropical Africa), *Thrinchostoma* (9 from S.E. Asia, 15 from Madagascar and 24 from tropical Africa). An allied parasitic genus *Parathrinchostoma* (2 spp.) is known from Madagascar (Michener, 1978a). By its conspicuously elongate lower half of the head, *T. asianum* is safely placed in *Diagonozus*. The body size also is larger than some Asian congeners (see metric comparison with *T. flaviscapus*) as is African *Diagonozus* species (Blüthgen, 1930). However, *T. asianum* is less differentiated in important characters as mentioned in diagnosis, occupying the intermediate position between *Thrinchostoma* s. str. and *Diagonozus* of Africa.

The similarity between *T. asianum* and the African consubgeners is explained either by independent evolution of long mouthparts and malar space in the two regions or by dispersal of the ancestor of *T. asianum*: this arose in Africa from *Thrinchostoma* s. str. after its separation from *Eothrinchostoma* and emigrated to Asia before differentiation of extant African *Diagonozus* species, retaining some ancestral features as recognized in *T. asianum*. A similar scenario was proposed by Michener (1978a) on the origin and dispersal of *Parathrinchostoma* to Madagascar. However, the route from Africa to S.E. Asia by a highly specialized bee is more difficult to give a persuasive explanation. Thus the alternative hypothesis of independent evolution is yet not to be rejected. If this hypothesis is valid, a new subgenus should be erected for *T. asianum*, although we tentatively placed *T. asianum* in *Diagonozus*.

Little is known on the biology of *Thrinchostoma* except for a brief note by Rozen (Michener, 1969) on nests of *T. (T.) torridum* (Smith) from Natal as resumed below: Nests on a shady bank; entrances narrowed; cells horizontal, forming a cluster and placed in a cavity supported by earthen pillars; blind burrows absent. Their flower visiting habits have not been known. Our observations show that *T. asianum* is probably an oligotrophic bee, but it is unknown whether it is also oligolectic, e.g., whether females exclusively forage pollen from *Impatiens korthalsii*. *Thrinchostoma* is generally large and long-winged, and the body color is partly pale, resembling that of some nocturnal bees, but ocelli are not particularly large. This syndrome suggests their flight activity within shady primary forests. Other subgenera of *Thrinchostoma* may be more or less oligotrophic, judging from their long mouthparts and, less conspicuously, malar space. Long mouthparts evolved in many bee groups in various ways (Laroca *et al.*, 1989), sometimes accompanied with long malar space as well known in honey bees and bumble bees. In halictine bees this feature is shared by *Thrinchostoma*, *Lasioglossum longirostre* (Morawitz) in Central Asia (Popov, 1959; oligotrophic to *Salvia*), and *Chlerogas* and *Chlerogella* in Central and South America (Eickwort, 1969).

Finally *Thrinchostoma (T)* is compared with another group of long-tongued bees in S.E. Asia, the subgenus *Nesohalictus (N)* Crawford of the genus *Lasioglossum* (Sakagami, 1991), to show some unsolved problems:(1) Long mouthparts are accompanied by long malar space in *T* but not in *N*. (2) *T* may be more attached to primary forests than *N* judging from the insufficient experience on *N* by one of us (SFS). (3) At least *T. asianum* is oligo-trophic in nectar intake. Oligotrophy in other *T* and in *N* is likely but not yet documented. (4) *N* retains basitibial comb, although accompanied with long hairs, which is entirely absent in *T*, both suggesting specialized pollen foraging. (5) Femoral scopa is normal in *T*, not sparse as in *N*. (6) *N* seems oligolectic, foraging large pollen of *Hibiscus*, etc., while oligolecty in *T* is not yet confirmed. (7) Unlike in many halictine groups, females are not collected more than males in both *N* and *T*. SFS examined 5♀5♂ of *L. (N.) halictoides* (Smith) and 6 ♀ 10♂ of *L. (N.) serenum* (Cameron). In *Thrinchostoma* species on which numbers of data were available for us, 13 species are known in ♀♂, 5 in ♀ only and 16 in ♂ only.

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坂上昭一、加藤真、市野隆雄　*Thrinchostoma* (*Diagonozus*) *asianum* sp. nov.: アフリカ産コハナバチの長舌の1亜属 (*Diagnozus*) のスマトラからの発見と、そのツリフネソウ属植物の花蜜への依存

アフリカから4種が知られていた *Diagnozus* 亜属（コハナバチ科）にスマトラから発見された1新種が加わり *Thrinchostoma asianum* として記載された．*Thrinchostoma asianum* は頭部下部が異常に長いという特徴をアフリカ産の他の種と共有しているが，そのほかの形質では特殊化の程度が低い．この種は林床性のハチで，スマトラに固有のツリフネソウの一種 *Impatiens korthalsii* の吸蜜に特殊化したハナバチであろうと考えられる．