

# New genera and species of Drymini (Heteroptera, Rhyparochromidae) feeding on *Ficus* in Brunei<sup>1</sup>

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**Abstract:** Two new genera (*Heissodrymus* nov.gen. and *Borneodrymus* nov.gen.), one new subgenus, *Notochilaster* (*Parachilaster*), and six new species (*Heissodrymus magnus* nov.sp., *H. erikae* nov.sp., *H. bruneiensis* nov.sp., *Borneodrymus gracilis* nov.sp., *Notochilaster* (*Parachilaster*) *collaris* nov.sp., and *N. (Notochilaster) heissi* nov.sp.) belonging to the tribe Drymini are described and illustrated. Keys are provided to the genera of the “*Lamproplax* group”, the species of *Heissodrymus*, and the subgenera and species of *Notochilaster*.

**Key words:** Borneo, *Borneodrymus*, *Heissodrymus*, new genera, new species, *Notochilaster*, Rhyparochromidae.

## Introduction

The author studied the Rhyparochromidae material of Dr. Ernst Heiss in the Heteroptera collection of the Natural History Museum in Innsbruck (Austria). It included some specimens in the family Rhyparochromidae collected “feeding on the seeds of *Ficus* trees at night” by Dr. Heiss in Brunei. It is well known that many species of Lygaeidae, Heterogastridae and Rhyparochromidae feed on *Ficus* seeds. The most important article on this subject is the work of SLATER (1972), which concerns African and American Lygaeoidea.

The specimens in question belong to the tribe Drymini. All species of Drymini found in the study were formerly unknown to science. It is a considerably diverse tribe with many undescribed species mostly from the Oriental region (Holarctic, Ethiopian and Australian regions are extensively explored, but the tribe has no representatives in the Neotropical region). Paratypes of some of the new species are also deposited in the Natural History Museum of Vienna (NHMW), the Hungarian Natural History Museum in Budapest (HNHM), Nationaal Natuurhis-

torisches Museum, Leiden (RMNH), Zoologisch Museum, University of Amsterdam, Amsterdam (ZMAN) and the Natural History Museum in London (BMNH). A key to the genera of the “*Lamproplax* group” is provided, along with a discussion of characters defining the group. Keys to the species of *Heissodrymus*, and to the subgenera and species of *Notochilaster* are also provided.

## *Heissodrymus* nov.gen. (Fig. 1)

Head: Wide, eyes situated near fore end of pronotum but not touching it. Ocelli large, situated behind the level of hind margin of compound eyes, a little closer to eyes than to each other. From lateral base of head a C-shaped shiny line, reaches middle of eyes. Eyes rather large but flat (especially inner margin), not protruding; temporal part behind eyes not narrower than eyes, then abruptly narrowing. Pubescence of head very minute, hardly visible. Head very finely wrinkled, dull. Antenniferous tubercles very minute, antennae erected almost at fore end of eyes. Antennae slender, covered with very fine pubescence and some erect setae (first segment on inner side with a few short setae). First antennal segment curved outwards, with

<sup>1</sup>I dedicate this paper to Dr. Ernst Heiss, excellent heteropterist, on the occasion of his 70<sup>th</sup> birthday. He has contributed greatly to our knowledge of the Heteroptera, and set very high standards for other systematists who work on this suborder.

3/4 of its length extending beyond apex of head. Bucculae short, semi-circular, not reaching level of base of antennae, fore part diverging. Labium reaching middle level of mesosternum or middle coxae, first segment reaching level of hind margin of eyes.

Thorax: Pronotum long, coarsely punctate (except humeral elevation), both lobes of similar length; disc of anterior lobe strongly convexly expanded. Lateral margin explanate, anteriorly wider (about same width as tibiae), posteriorly narrower (at humeral elevation extremely narrow). All margins of pronotum deeply concave; lateral margins of posterior lobe strongly narrowing anteriorly to transverse impression; of anterior lobe arcuate; anterior angles rounded.

Scutellum elongate, with strong Y-shaped ridge (not reaching base of scutellum), sharply elevated on posterior arm. Surface except ridge coarsely punctate; on basal third of scutellum with a few scattered punctures.

Clavus with three full rows of punctures, inner one with smaller punctures, basally elevated between two inner rows. Corium slender, sides nearly parallel, apical margin straight (slightly concave in apical part). Endocorium with two parallel rows of punctures (outer row sometimes slightly irregular), otherwise endocorium smooth. Mesocorium strongly and evenly punctate, fracture elevated to the level of end of clavus. Exocorium very narrow, almost linear, marginated by row of punctures and strong elevated vein R+M. Apical margin of corium with row of punctures and fine low ridge behind it. Venation of membrane clearly visible, similar to that of other rhyparochromine species.

Sternum partially punctate, meso- and metapleura bulbous, metapleura visible from above. Mesosternum medially with a short ridge with a groove behind it; on both sides of groove smooth and shining. Ostiolar peritreme short, basally orientated obliquely forward, apically with a perpendicular shining ridge, curving backwards at extreme apex (the whole structure appearing C-shaped). Evaporative area small, reaching dorsally to only about 1/3 of height of metapleuron. Border between meso- and metasterna with a deep, narrow groove, its fore

margin pruinose. Posterior part of metasternum strongly punctate.

Legs slender and straight, inner part of femora with rows of strong but slender spines, without teeth. Tibiae with strong spines, longer than femoral spines.

Abdomen: Dull with very short pubescence. Sterna medially bluntly carinate. Sternum III uneven, with tiny elevations and impressions, and a greater hump at the lateral margin. Lateral part of sternum VI moderately orientated forwards. Trichobothria clearly visible, situated as in other genera of Drymini.

Type species: *Heissodrymus magnus* nov.sp.

Etymology: This genus is named in honour of Dr. Ernst Heiss, collector of all three new species, and a leading specialist in the family Aradidae, and in the type genus of this tribe, *Drymus* FIEBER 1860.

Remarks: *Heissodrymus* belongs to a well defined group of genera in the tribe Drymini. One of the most important features of the group is the thick femora without teeth, but they all have more or less visible slender spines (similar to those on tibiae and first antennal segment). They have very minute antenniferous tubercles; short semi-circular bucculae; moderately explanate pronotal lateral carinae (delimited by a row of punctures and not widened at transverse groove); concave basal pronotal margin; elongate scutellum; 3 full rows of punctures on clavus; sunken exocorium; straight apical corial margin; and little evaporative area. The metapleura are often elevated and visible from above, and in most cases sternum VI is laterally orientated forwards, and the majority of genera have a sometimes obscure but great pruinose spot on sternum IV and V.

All of the related genera are relatively wide. Within the group, *Lemnius* DISTANT 1904 and *Thebanus* DISTANT 1904 (the two probably synonymous) have weak femoral spines, pronotum evenly punctate, and the scutellar ridge weak. *Kanigara* DISTANT 1906 has weak and evenly distributed punctures on the pronotum and scutellum, lateral margins of pronotum carinate, and scutellum without a scutellar ridge. *Kanigara clypeata* (DISTANT 1904), *K. flavoscuta* SCUDDER 1969 and *K. tu-*

*berculata* SCUDDER 1969 are exceptions, and it is questionable whether they belong to *Kanigara* or to a new genus. They all have the pronotum strongly punctate, and *K. flavoscuta* and *K. tuberculata* also have a scutellar ridge and bulbous metapleura. *Coracodrymus* BREDDIN 1901 is very shiny and glabrous, has a straight posterior pronotal margin, enlarged and low Y-shaped carina on scutellum, and a large prominent pruinose spot on sterna IV and V. In *Lamproplax* DOUGLAS & SCOTT 1868 the distance between compound eyes and base of antenna is longer than in other genera, the scutellar ridge is relatively low, and the metapleura are scarcely expanded. *Parastilbocoris* CARAYON 1964 has a long dense erect pubescence, carinate lateral margins on pronotum, and only slightly elevated scutellar carina and metapleura. *Stilbocoris* BERGROTH 1893 is the most diverse genus in the group (probably some species belong to other genera). In this genus the development of scutellar carina, spinosity of femora (with teeth on fore femora or without bristles on middle and hind femora in some species), punctuation of pronotal lobes and width of lateral carina of pronotum (mostly carinate but sometimes narrowly laminate), are fairly variable. Thus some species are similar to *Kanigara* or *Lemnius*, some to *Lamproplax*, etc. CHOPRA & SINGAL (1982) mean that *Kanigara* can be congeneric with *Stilbocoris*.

**Key to genera of the "Lamproplax group"**

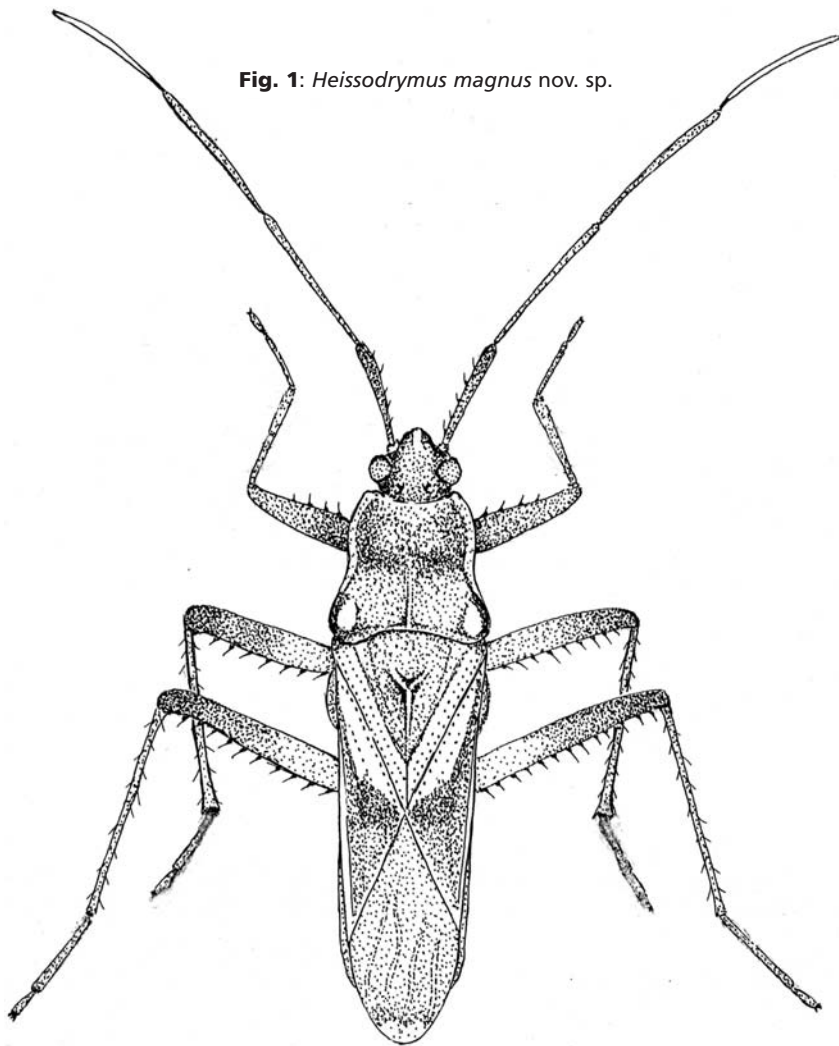
- 1 Scutellum flat, without Y-shaped carina; punctuation of pronotum and scutellum very fine, pronotum slightly narrowing anteriorly (mostly convex laterally). In case scutellar carina present, inner part of apical corial margin strongly concave (*K. clypeata*, *K. flavoscuta* and *K. tuberculata*) (Oriental, New Guinea) ..... *Kanigara* DISTANT 1906
- Scutellum with Y-shaped carina (in case ridge obscure, punctuation of pronotum and scutellum strong and pronotum strongly narrowing anteriorly: *Lemnius* and *Thebanus* in part); inner part of apical corial margin straight or at most slightly concave ..... 2
- 2 Body with dense and long erect pubescence dorsally. Middle and hind femur

- with 1 or 2 setae (much longer than diameter or tibiae). Scutellar carina almost flat (Ethiopian) ..... *Parastilbocoris* CARAYON 1964
- Body glabrous or with fine and sparse pubescence. Middle and hind femur usually with more setae ..... 3
- 3 Posterior part of pronotum with strong and dense punctures, transversal elevation almost smooth; lateral margin of pronotum moderately laminate, posterior margin straight or concave ..... 4
- Punctures of pronotum not very different on anterior and posterior part; lateral margin of pronotum carinate, posterior margin concave ..... 6
- 4 Abdomen with a large pruinose spot, extending from segments IV-V. Lateral margin of pronotum convex, posterior margin straight (Celebes) ..... *Coracodrymus* BREDDIN 1901
- Abdomen without a pruinose spot. Lateral margins of pronotum straight or concave, posterior margin concave ..... 5
- 5 Meso- and metapleura strongly bulbous, in dorsal view distinctly visible. Lateral margins of pronotum straight or faintly concave (Oriental) ..... *Heissodrymus* nov.gen.
- Meso- and metapleura slightly convex, in dorsal view invisible. Lateral margins of pronotum concave (Palaeartic, Oriental) *Lamproplax* DOUGLAS & SCOTT 1868
- 6 With a fine anterior pronotal collar (mostly visible). Length and width of scutellum subequal. All of femora with bristles (Oriental, Australian) ..... *Lemnius* DISTANT 1904 and *Thebanus* DISTANT 1904
- Without a pronotal collar. Scutellum considerably longer than broad; middle and hind femora often without bristles and/or fore femora with teeth (Ethiopian) ..... *Stilbocoris* BERGROTH 1893

***Heissodrymus magnus* nov.sp. (Fig. 1)**

Body: Dull (or only slightly shiny) and shagreened; membrane shiny. Almost glabrous, with very minute hairs on head and abdomen only. Labium reaching middle part of mesosternum. Anterior collar of pronotum

Fig. 1: *Heissodrymus magnus* nov. sp.



tum narrow, hardly visible, demarcated by a fine groove. Pronotal surface slightly convex, almost flat. Raised glabrous humeral angles, and prominent mid-longitudinal keel on posterior lobe shiny. Anterior arms of scutellar ridge meet in a right angle. Vein R+M with many tiny irregular elevated granules. Fore femora with only 3 spines; middle and hind femora with two rows of 10-15 spines (the spines rather short and dense).

Colour: Ground colour castaneous; inner angle of corium with a black spot (Fig. 1). First three antennal segments, labium, basal part of pronotum, Y-ridge of scutellum, clavus, most of corium and membrane (except dark margins), lateral margin of abdomen, fore femora and tibiae, apical half of middle and hind femora, and basal half of hind tibiae brown (tibiae and tarsi lighter). Fourth antennal segment, humeral elevation of pronotum, basal part of endocorium behind level of apex of scutellum, two basal

and one apical spots on membrane, and basal half of middle and hind femora whitish (sometimes to dark testaceous).

Measurements (in mm) of holotype: Length of head 1.25, width of head with eyes 1.5, eye width 0.38, eye length 0.5, distance between eye and base of antenna 0.12, length of antennal segments 1.75: 2.5: 2.3: 1.9, length of labial segments 0.82: 0.95: 0.58: 0.38, length of pronotum 2.2, maximum width of pronotum 2.55, length of scutellum 2.1, length of claval suture 0.65, maximum width of fore femur 0.45, of hind femur 0.38, total length of body 9.1, body width 2.75. Body length of paratypes between 8.6 and 9.3.

Holotype: Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-5.4.1995, leg. E. Heiss (1♂). In E. Heiss collection, Innsbruck. Paratypes: Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-5.4.1995, leg. E. Heiss (1♂) (Heiss); Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-8.5.1995, leg. E. Heiss (1♂, 2 ♀ ♀) (Heiss); Malaysia, W. Perak, 40km SE of Ipoh, 900 m, Banjaran titi Wangsa, RINGLET, 29.III.-15.IV.2004, P. Cechovsky (3 ♀ ♀) (NHMW); Indonesia, Kalimantan Barat, Gulung Palung Nat. Park, Cabang Panti research site, 1°13' S, 110°7' E, lowland rainforest, swept & beaten, No.11., 18-26.VII.1993, leg. O. Merkl (1/) (HNHM).

Diagnosis: *H. magnus* is distinguished from the other two species by the characters used in the key below.

Etymology: The name of the species is derived from the extremely large body (one of the largest Drymini species).

#### *Heissodrymus erikae* nov.sp.

Body shiny, except for scutellum and a large dark spot at inner angle of corium (both dull). Head, pronotum, scutellum and labium with short sparse erect pubescence (slightly shorter than diameter of antennal segment II). Antennal segment II considerably longer than segment III. Labium reaching base of middle coxae. Pronotal collar fully absent, pronotum behind anterior margin strongly punctate; pronotal surface moderately convex. Median keel on pronotum absent. Fore arms of scutellar ridge meet in an acute angle. Inner row of punctures of clavus very fine, hardly visible. Corial veins without irregular

granules. Fore femora with 7-9 spines and with stronger setae than in *H. magnus*; middle and hind femora with less than 10 spines in a line. Femora, especially the hind femora, shorter and thicker than in *H. magnus*.

Colour similar to *H. magnus*, but first and fourth antennal segments, labium, legs, and humeral angles of pronotum, are reddish brown (the last mentioned sometimes brown). Scutellum fully brown, basal half of membrane yellowish. Corium with a white and a black spot.

Measurements (in mm) of holotype (as 3<sup>rd</sup> and 4<sup>th</sup> antennal segments are missing, these measurements are of paratype): Length of head 0.88, width of head with eyes 1.32, eye width 0.32, eye length 0.42, distance between eye and base of antenna 0.08, length of antennal segments 1.1: 1.85: 1.6: 1.5, length of labial segments 0.75: 0.88: 0.5: 0.35, length of pronotum 1.62, maximum width of pronotum 1.98, length of scutellum 1.75, length of claval suture 0.42, maximum width of fore femur 0.42, of hind femur 0.45, total length of body 6.7, body width 2.00. Body length of paratypes between 5.3 and 7.85.

Holotype: Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-5.4.1995, leg. E. Heiss (1♂). In E. Heiss collection, Innsbruck. Paratypes: Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-5.4.1995, leg. E. Heiss (1♀) (HNHM); Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-8.5.1995, leg. E. Heiss (1♂, 1♀) (Heiss); Malaysia-SW Sabah, nr. Long Pa Sia (East), Mal. trap 5, c. 1000 m, 25.XI-7.XII. 1987, leg. C.v. Achterberg (1♂, 1♀); Malaysia-SE Sabah, nr. Danum Valley Field C.E1, Mal. trap 7, c. 150 m, 21-25.III. 1987, leg. C.v. Achterberg (1♂); Sabah, Crocker Range, Keningau - Tambunan rd (km 34), 900 m, evergreen scrub (secondary), 3 human excr. traps, 21-24.XI. 1987, leg. Krikken & Rombaut (1♂) (RMNH).

Diagnosis: *H. erikae* is distinguished from the other two species by the characters used in the key below.

Etymology: I dedicate this species to my wife who is a great help and encouragement to me in my work.

### *Heissodrymus bruneiensis* nov.sp.

Very similar to *H. erikae*, the major differences being:

Slightly smaller, body wider but head longer, antennal segments II and III of similar length, antennae unicolorous reddish brown, corium without whitish spot, more or less unicolorous brown (but dark dull spot at inner angle present), membrane luteous except for moderately wide dark margins.

Measurements (in mm): Length of head 0.9, width of head with eyes 1.1, eye width 0.28, eye length 0.45, distance between eye and base of antenna 0.1, length of antennal segments 0.8: 1.45: 1.45: 1.3, length of labial segments 0.65: 0.7: 0.45: 0.35, length of pronotum 1.45, maximum width of pronotum 1.9, length of scutellum 1.5, length of claval suture 0.4, maximum width of fore femur 0.32, of hind femur 0.32, total length of body 6.0, body width 1.95. Body length of paratypes between 5.2 and 6.25.

Holotype: Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-8.5.1995, leg. E. Heiss (1♂). In E. Heiss collection, Innsbruck. Paratypes: Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-8.5.1995, leg. E. Heiss (4♂♂, 1♀) (Heiss), (1♂) (HNHM); Malaysia-SW Sabah, nr. Long Pa Sia (East), Mal. trap 5, c. 1000 m, 25.XI-7.XII. 1987, leg. C.v. Achterberg (1♂, 1♀); Malaysia-SW Sabah, nr. Long Pa Sia (West), Mal. trap 2, c. 1020 m, 25.XI-8.XII. 1987, leg. C.v. Achterberg (1♂); Sabah, Crocker Range, Kota Kinabalu - Tambunan rd (km 56), 1350 m, multistr. evergr. forest, 2 human excr. traps, 21-24.XI. 1987, leg. Krikken & Rombaut (1♂); Sabah, Kinabalu NP, Silau Silau (low), multistr. evergr. forest, 2 fish traps, 12-17.I. 1986, leg. Krikken (1♂) (RMNH).

Diagnosis: *H. bruneiensis* is distinguished from the other two species by the characters used in the key below.

Etymology: The name of the species is derived from the locality of the type series.

### Key to the species of *Heissodrymus*

- 1 Posterior lobe of pronotum with median keel. Fore femur with only 3 spines . . . . .  
 . . . . . *H. magnus* nov.sp.
- Pronotum without median keel. Fore femur with at least 5 spines . . . . . 2
- 2 More slender (ratio of body length to width about 3.4); head shorter (ratio of head length to width about 0.67). Antennal segments not unicolorous, corium with a white and a black spot . . . . .  
 . . . . . *H. erikae* nov.sp.

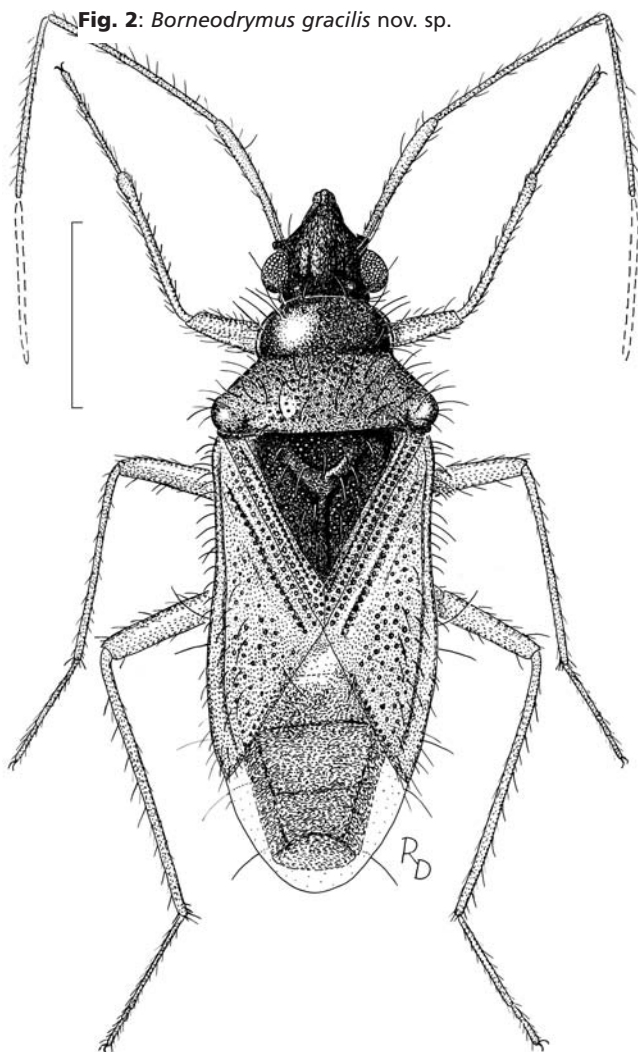


Fig. 2: *Borneodrymus gracilis* nov. sp.

- Body wider (ratio of body length to width about 3.2); head longer (ratio of head length to width about 0.8); antennal segments and corium almost unicolorous . . .  
 . . . . . *H. bruneiensis* nov.sp.

***Kanigara oculata* SCUDDER 1969**

Brunei-Temburong, Belalong Field Research Center, mixed *Dipterocarpus* forest, ~100 m, 2-8.5.1995, leg. E. Heiss (2♂♂) (Heiss).

***Borneodrymus* nov.gen. (Fig. 2)**

Head: Impunctate; laterally parallel, slightly shorter than broad; with fine decumbent pubescence. With a pair of S-shaped shiny lines between eyes. Eyes round, slightly protruding, removed far from anterior end of pronotum, beyond them temporal part with prominent wrinkle. Ocelli situated behind hind margin of compound eyes, closer to eyes than to each other. Antenniferous tubercles small, diverging;

antennae erected near eyes. Antennae long and slender, rather cylindrical, covered with long erect hairs, segment I extending 2/3 of its length beyond apex of head. Bucculae short, semi-circular, not reaching base of antennae, fore part slightly diverging. Labium extending to hind coxae, segment I almost reaching base of head.

Thorax: Pronotum laterally deeply concave, strongly punctate except anterior half and humeral elevation. Transverse impression not very deep. Collar narrow, obscurely delimited, deeply punctate. Anterior lobe convex, smooth, punctate laterally and behind collar only, moderately shorter than posterior lobe (ratio of anterior lobe to posterior lobe 0.7). Lateral carina evenly narrow, with a few punctures, posterior end rounded. Lateral margins on posterior lobe strongly narrowing to transverse impression (about 45°); on anterior lobe nearly parallel, rounded at anterior angles. Anterior and posterior margins straight; at posterior angles in front of clavus with a narrow plate-like margin. In lateral view pronotum evenly inclined.

Scutellum deeply and densely punctate except Y-shaped highly elevated median ridge. Clavus narrow, with two rows of punctures and a third inner row present only on posterior half. Corium basally parallel, then slightly convex, with two regular rows of punctures close to clavus, a third row along apical margin, and a fourth row between exo- and mesocorium. Mesocorium densely punctate. Exocorium narrowly carinate basally, after one-fourth broadened; sunken. Apical margin of corium straight, inner end slightly concave. Membrane translucent, venation hardly visible.

Sternum strongly punctate. Ostiolar peritreme small, evaporative area reduced, scarcely extending laterally beyond coxal cavities.

Legs straight, slender, and rather long. Fore femora without teeth, but with two short bristles. Tibiae with fine spines.

Abdomen: Shiny, with very short pubescence. Sternum VI laterally strongly orientated forwards. Trichobothria clearly visible, situated as in other genera of Drymini.

Type species: *Borneodrymus gracilis*, nov.sp.

**Etymology:** The name is derived from Borneo Island on which most of the type species type series was collected, and the name of the tribe, Drymini, to which the genus belongs.

**Remarks:** *Borneodrymus* is related to the above mentioned “*Lamproplax* group“, especially *Lemnius*, but femora are slender, middle and hind femora without spines; basal pronotal margins are straight; clavus with 2.5 rows of punctures; metapleura not expanded; sterna without pruinose spot. The most closely related genus is possibly *Chotekia* CHINA 1935 but it has a fully punctate pronotum and head, the lateral carinae on pronotum, run in the humeral elevation (in *Borneodrymus* they are separated) and its eyes touch the pronotum. Any similarity to the Ethiopian *Bexiocoris* SCUDDER 1969 is superficial. In *Bexiocoris* the head is punctate, the part behind eyes narrowing, with ocelli situated at level of posterior margin of eyes, the pronotum fully punctate, the collar much broader, the scutellar ridge partly punctate, the clavus with three full rows of punctures, and the fore femora are armed with teeth.

### *Borneodrymus gracilis* nov.sp. (Fig. 2)

**Body:** Elongate, shiny, dorsally covered with sparse erect setae, (longer than an eye). Pubescence on ventral surface much shorter (less than half as long as eye width).

**Colour:** Brown; hemelytra, antennae, rostrum and legs yellowish-brown.

**Measurements** (in mm) of holotype: Length of head 0.72, width of head with eyes 0.72, eye width 0.19, eye length 0.25, distance between eye and base of antenna 0.1, length of antennal segments 0.78: 1.25: 1.12: 1.0, length of labial segments 0.65: 0.72: 0.38: 0.28, length of pronotum 0.85, maximum width of pronotum 1.28, length of scutellum 0.85, length of claval suture 0.22, maximum width of fore femur 0.2, of hind femur 0.18, total length of body 3.85, body width 1.28. Body length of paratypes between 3.75 and 4.35, (some with relatively shorter antennae and broader body).

**Holotype:** Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-5.4.1995, leg. E. Heiss (1♂). In E. Heiss collection, Innsbruck. **Paratypes:** Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For.,

~100 m, 2-5.4.1995, leg. E. Heiss (2♀♀) (Heiss); Sarawak, Gunong Mulu Nat. Park, Melinau Gorge camp, 5.VI.1978, RGS Mulu exped., V. F. Eastop, B. M. 1978-411 (1♀) (BMNH); Sarawak, Rumeah Kabau anek muggot, Ng sebong Beleh, 25 km, III. 1994, leg. E. Kapit, I. Kodada (1♀); Malaysia, W. Perak, 40 km SE of Ipoh, 900 m, Banjaran titi Wangsa, RINGLET, 29.III.-15.IV.2004, leg. P. Čechovsky (1♀) (NHMW); Malaysia, Pahang, Tanah Rata, edge of degraded rainforest, at light, No. 72., 21.III.-2.IV.1995, leg. O. Merkl (1♂) (HNHM). Borneo, Sabah, Danum Valley, 70 km W Lahad Datu, Sungai Segama W. side suspension bridge, 150 m, sample Sab. 62, understory secondary growth-canopy riverine rainforest, at light, 10.XII.1989, leg. M.J. and J.P. Duffels (1♂) (ZMAN); Borneo, Sabah, Danum Valley, 70 km W Lahad Datu, Sungai Segama W. side suspension bridge, 150 m, sample Sab. 44, Nature Trail, 28.XI.1989, leg. M.J. and J.P. Duffels (1♀) (Amsterdam); Sabah, Jesselton, 6.XI.1968, leg. P.J.L. Roche (1♂) (Leiden); N. Sumatra, Alas Valley: Balelutu, ca. 320 m, 3°43'N, 97°38'E, no. 36, cult. Space in lowland Multistratal evergreen forest, at light, 3-8.VIII.1972, leg. J. Krikken (1♀) (RMNH).

**Etymology:** Named *gracilis* after its very slender body, antennae and legs.

### *Notochilaster* BREDDIN 1907

The most important distinctive characters of the genus:

Head with one or two pairs of small teeth on ventral surface (one tooth of each pair on each side of labium); ocelli situated nearer to composite eyes than to each other; eyes not reaching pronotum; antenniferous tubercles slightly diverging. Antennae fusiform, segment I reaching beyond apex of head by about half of its length. Pronotum without lateral carinae; scutellum with a triangular (not Y-shaped) elevation; clavus with three full rows of punctures. Ostiolar peritreme short, orientated slightly forward. Evaporative area small, reaching about one-third height of metapleura. Legs slender; all femora without teeth, spines, or short or long setae. Tibiae straight, without setae, but with a few rows of fine granules. Abdomen with fine pubescence. Segment III especially in the middle slightly swollen and elongated backwards. Suture between segments IV and V typical of rhyparochromine, orientated forwards, not reaching lateral margin; abdominal sternum VI laterally orientated forwards; trichobothria of Drymini type.

Remarks: *Notochilaster* BREDDIN 1907 previously was a monotypic genus described for *N. teres* BREDDIN 1907 from Nalanda, Ceylon (Sri Lanka). Besides the type specimen SLATER (1979) recorded a further specimen from Sri Lanka. The author knows a further specimen from Nambantota (South Ceylon; HNHM). The species seems to be endemic in Ceylon.

***Notochilaster (Parachilaster)*  
nov.subgen.**

Pronotal collar prominent, demarcated by a row of punctures; anterior pronotal lobe impunctate.

Type species: *Notochilaster (Parachilaster) collaris*, nov.sp.

Diagnosis: *Notochilaster (Parachilaster)* is easily distinguished from *Notochilaster (Notochilaster)* BREDDIN 1907 by the row of punctures demarcating the pronotal collar, and by the impunctate anterior pronotal lobe, which is finely, but fully punctate in *N. (Notochilaster)*.

Etymology: The name of the new subgenus is formed from its relationship to *Notochilaster*.

***Notochilaster (Parachilaster)*  
*collaris* nov.sp.**

Body: Moderately slender, shiny (except ventral part of head and thorax), punctate (except on anterior pronotal lobe), glabrous (except head, antennae and abdomen, which are covered with dense decumbent pubescence).

Head with dense punctures, moderately long. Eyes slightly protruding. Eyes 2x longer than their distance from base of antennae. Bucculae practically absent. Labium reaching base of hind coxae, first segment not reaching hind margin of eyes.

Thorax: Pronotum with a narrow but distinct anterior collar, demarcated by a row of punctures; transverse impression strong (medially absent). Ratio length of anterior lobe to posterior lobe 0.85; anterior lobe moderately swollen and impunctate. Lateral margins concave (on posterior lobe narrowing forward about 45°, on anterior lobe slightly convex); anterior margin straight, posterior margin convex. Corium with 2 par-

allel rows of punctures along clavus, a third row along border of exo- and mesocorium, and a row along apical margin of corium; distal half of mesocorium finely punctate. Costal margin of corium near base concave, behind level of apex of scutellum convex; apical margin straight. Exocorium carinate to level of scutellar apex, behind that widened, distinct and parallel to apex. Sternum evenly punctate (except middle part of mesosternum and posterior part of metasternum).

Colour: Dark brown. Basal part of pronotum slightly lighter; abdomen light reddish-brown; antennae yellowish-brown; legs (except coxae) and labium yellow. Hemelytra with yellowish-brown spots on the following: outer part of clavus, basal one-third of corium, and a single small spot on exocorium about three-fourths from base. Membrane brown with translucent basal margin and a spot on inner margin fused with basal spot, seeming to form an inverted V.

Measurements (in mm) of holotype: Length of head 0.52, width of head with eyes 0.58, eye width 0.14, eye length 0.2, distance between eye and base of antenna 0.1, length of antennal segments 0.38: 0.55: 0.52: 0.50, length of labial segments 0.4: 0.42: 0.3: 0.3, length of pronotum 0.62, maximum width of pronotum 0.95, length of scutellum 0.5, length of claval suture 0.32, width of fore femur 0.15, width of hind femur 0.12. Total length of body 2.92, width of body 0.95.

Holotype: Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-5.4.1995, leg. E. Heiss (1 ♀). In E. Heiss collection, Innsbruck.

Diagnosis: *Notochilaster (Parachilaster) collaris* nov.sp. is distinguished from *Notochilaster (Notochilaster)* spp. by the distinct collar, demarcated by a row of punctures, by the impunctate anterior pronotal lobe and by the shining body.

Etymology: I name the species after the distinct and demarcated pronotal collar.

***Notochilaster (Notochilaster) heissi*  
nov.sp. (Fig. 3)**

Body: Slender, completely dull, punctate and glabrous (except clypeus, antennae



and abdomen, which are covered with dense decumbent pubescence).

Head long, ventral surface with two pairs of minute spines, one pair on each side of labium. Eyes nearly round, not protruding. Eyes 3 x longer than their distance from base of antennae. Bucculae practically absent. Labium reaching base of hind coxae, first segment not reaching hind margin of eyes.

Pronotum: with weak anterior collar, and a strong transverse impression; lateral margins concave; anterior lobe longer than posterior lobe (ratio 0.85) and moderately swollen; punctation on anterior lobe finer than on posterior lobe. Corium with 2 parallel rows of punctures along clavus, a third row along border of exo- and mesocorium, a half row beside them, and a row along apical margin of corium; distal half of mesocorium punctate. Costal margin of corium near base slightly concave, apical margin straight. Exocorium carinate to level of scutellar apex, behind that widened, near apex becoming indistinct. Membrane with four veins, inner two forming an S, outer two divergent, hardly visible at base.

Sternum evenly punctate except middle part of mesosternum and posterior part of metasternum.

Colour: Dark brown. Antennal segment II and basal half of III, basal part of pronotum, and hemelytra brown; antennal segment IV, sometimes apical part of segment III, labial segments II-IV, tibiae and tarsi, membrane, and basal one-third of corium yellowish-brown.

Measurements (in mm) of holotype: Length of head 0.5, width of head with eyes 0.65, eye width 0.15, eye length 0.2, distance between eye and base of antenna 0.08, length of antennal segments 0.50: 0.55: 0.52: 0.52, length of labial segments 0.42: 0.45: 0.48: 0.30, length of pronotum 0.7, maximum width of pronotum 1.1, length of scutellum 0.48, length of claval suture 0.28, maximum width of fore femur 0.18, of hind femur 0.15, total length of body 3.3, width of body 1.1. Body length of paratypes paratypes between 3.3 and 3.6.

Holotype: Brunei-Temburong, Belalong Field Res. C. Mix. Dipterocarp For., ~100 m, 2-5.4.1995, leg. E. Heiss (1♂). In E. Heiss collection, Innsbruck. Paratypes: Sarawak, Belaga, NE of Kapit, leg. B. Molnár (1♂) (HNHM); Sarawak,

ca. 40 km SE Kapit, Rumeu Ugap Ng manating bena Kapit Sut, III. 1994, leg. I. Kodada (1♀); Malaysia, W. Perak, 40km SE of Ipoh, 900 m, Banjaran titi Wangsa, RINGLET, 29.III.-15.IV.2004, P. Čechovsky (1♀) (NHMW); Sabah, Jesselton, 13.II.1969, leg. P.J.L. Roche (1♀) (Leiden); N. Sumatra, Bivouac One, Mt. Bandahara, ca. 810 m, 3°43'N, 97°41'E, no. 23, 25.VI.-5.VII.1972, leg. J. Krikken (1♀) (RMNH).

Diagnosis: *Notochilaster* (*Notochilaster*) *heissi* nov.sp. is distinguished from *Notochilaster* (*Notochilaster*) *teres* BREDDIN by the deep pronotal transverse impression and the much flatter, scarcely elevated, scutellum.

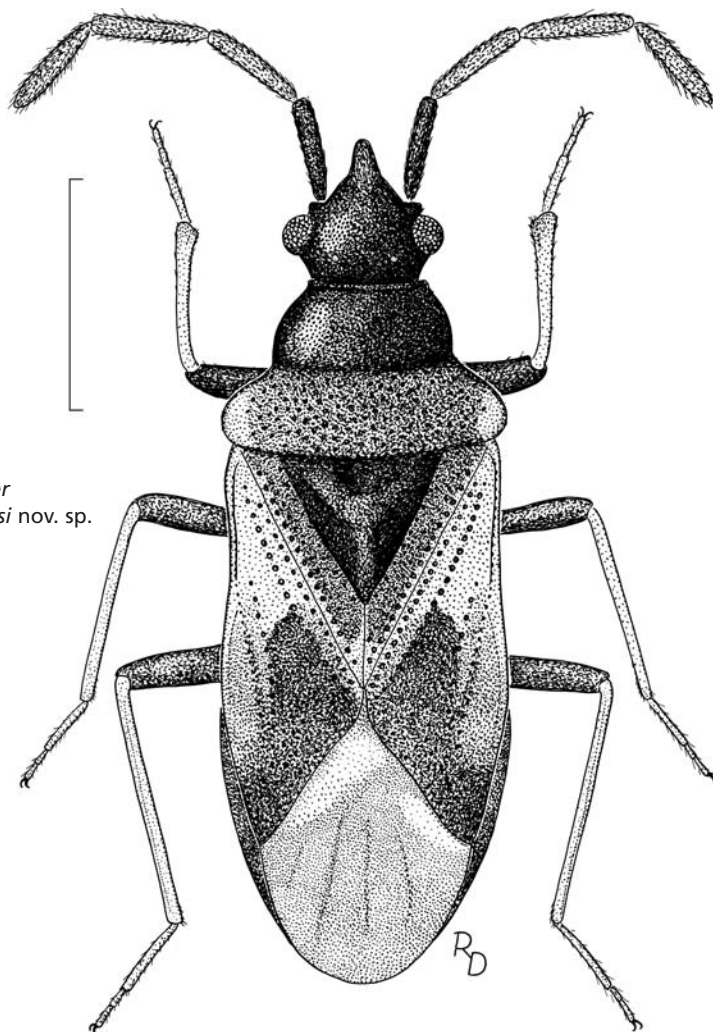
Etymology: I dedicate this species to Dr. Ernst Heiss, collector of the holotype, and a leading researcher of Heteroptera over many years.

### Key to the subgenera and species of *Notochilaster*

- 1 Pronotal collar distinct, demarcated by a row of punctures; anterior pronotal lobe impunctate (*Parachilaster*) . . . . .  
 . . . . . *N. collaris* nov.sp.
- Pronotal collar much less prominent, without a demarcating row of punctures; anterior pronotal lobe punctate (*Notochilaster*) . . . . . 2
- 2 Head longer, as long as wide, eyes about 1.5 x longer than the distance between eyes and base of antennae; transverse impression of pronotum weak; anterior lobe much longer than posterior lobe; scutellum almost flat . . *N. teres* BREDDIN 1907
- Head shorter, wider than long, eyes about 3.0 x longer than the distance between eyes and base of antennae; transverse impression of pronotum deep; anterior lobe slightly shorter than posterior lobe; scutellum elevated . *N. heissi* nov.sp.

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**Fig. 3:** *Notochilaster*  
(*Notochilaster*) *heissi* nov. sp.

History Museum in London. Special thanks are due to the artists, Bernadett Gyurkó (for Fig. 1) and Dávid Rédei (for Figs 2 and 3), and to Péter Lugosi who kindly reviewed the text. I am very thankful to Dr. Alan C. Eyles for the proper review which greatly improved the manuscript.

### Zusammenfassung

Zwei neue Gattungen (*Heissodrymus* nov.gen. und *Borneodrymus* nov.gen.), eine neue Untergattung, *Notochilaster* (*Parachilaster*), und sechs neue Arten (*Heissodrymus magnus* nov.sp., *H. erikae* nov.sp., *H. bruneiensis* nov.sp., *Borneodrymus gracilis* nov.sp., *Notochilaster* (*Parachilaster*) *collaris* nov.sp. und *N. (Notochilaster) heissi* nov.sp.) des Tribus Drymini werden beschrieben und abgebildet. Bestimmungsschlüssel der „*Lamproplax*-Gruppe“, der Arten von *Heissodrymus* sowie der Untergattungen und Arten von *Notochilaster* werden präsentiert.

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