

## The Genus *Desmopachria* Babington, Subgenus *Portmannia* Young (Coleoptera: Dytiscidae)

**Frank N. Young**

Professor Emeritus  
Indiana University  
Bloomington, IN 47401

**Abstract:** The subgenus *Portmannia* Young (1980) of the Neotropical genus *Desmopachria* is characterized by its ovate, sometimes almost globose body form, smooth shining integument between relatively fine punctures, and sexually dimorphic prosternal process. In the females the prosternal process comes to a point as in other members of *Desmopachria*, but in males the process is bifid or forked. The species are found from Texas and Arizona to Brasil in South America. They are particularly abundant in Mexico. A key is given for twelve species which are described and figured. The following species are described as new: *decorosus* (Mexico), *goias* (Brasil), *pittieri* (Costa Rica), *sobrina* (Mexico) and *zethus* (Mexico).

The color is variable. Some species are relatively darkly colored without distinct darker markings, and usually with some coarser punctation on part of the dorsum. These seem to be characteristic of the tropical forests (*D. laevis* Sharp and *D. specula* Sharp). *D. goias* is also dark with vague spots on the elytra. Most of the Mexican and Central American species are characterized by at least parts of the elytra being lighter in color than the head and pronotum, sometimes strikingly contrasting. The latter group may or may not have a distinct dark color patterns of the elytra or on head and pronotum. In both groups some species are intensely dark brown or black beneath, but this character may be influenced by degree of hardening of the cuticle. Nearly all the species have darker markings along the suture of the elytra and base of the pronotum. Some species are distinctly patterned on the elytra which probably represents disruptive coloration helping to conceal them in the clear, sand-bottomed habitats in which most occur.

The water beetles of the Dytiscid genus *Desmopachria* Babington (1841) are confined to the Americas extending as far north as Canada in the Nearctic. Their diversity in the tropics is truly amazing. As many as 10 or more distinct species may be taken in a single light trap collection.

The subgenus *Portmannia* Young (1980: 307, 310) is most abundant in the Southwestern United States into Central America with a few species in Brazil. Most of the species seem to be characteristic of the higher elevations rather than the lowland tropics in which the species of *Desmopachria* (s. str.) are so characteristic.

Morphologically, the species assigned to *Portmannia* may be distinguished from other *Desmopachria* by the remarkable sexual difference in the male and female prosternal processes. In females the process is formed with an acute angle in front where the margins come together and a posterior part which forms an acute projection to the rear; in contrast, in males the process is similar in front, but bifurcate or bifid behind. The male structure may have some biological significance. It is possible that it forms a small suction organ during copulation, or is a device for pheromone

retention. Other distinguishing characteristics are the fine punctuation and glass-like smoothness of parts of the dorsum and venter in most species; the more rotund body form unlike the flattened form of some other species of *Desmopachria*; the smooth metacalcaria. The male external genitalia have the parameres long, curved, and with dense brushes of elongate setae and the aedeagus almost as long as the parameres.

### Key to the known species of *Desmopachria*: Subgenus *Portmannia* Young.

1. Metacoxal lamina and often other ventral parts very dark brown or appearing shining black in mature individuals ..... 2
- 1'. Metacoxal lamina and other ventral parts at most dark reddish brown, not appearing shining black ..... 8
- 2(1.) Size small, about 1.5 to 1.8 mm in total length; elytra without definite dark pattern except narrowly along suture and bases of elytra ..... 3
- 2'. Size larger, usually over 2.0 mm in total length; elytral markings variable, sometimes with a distinct melanic elytral pattern ..... 4

<sup>1</sup>Contributions from the Biological Laboratories of Indiana University aided by grants from the N.S.F., N.I.H., and the Indiana University Foundation.

- 3(2). Aedeagus of male external genitalia wide for entire length (Fig. 3); a species of the hylean forest ...  
..... *laevis* Sharp
- 3'. Aedeagus of male external genitalia narrow (Fig. 9); a species of the Central American forests  
..... *sobrina* sp. nov.
- 4(2'). Anterior margin of clypeus distinctly truncate (squarely cut off) or in some cases indented in dorsal aspect; total length about 2 to 2.2 mm; male external genitalia as in Fig. 1; Texas, Arizona, and northern Mexico .....  
..... *portmanni* (Clark)
- 4'. Anterior margin of clypeus at most feebly truncate, seldom indented ..... 5
- 5(4'). Elytra with melanic pattern similar to that of *variegata* Sharp, but reduced in intensity; male external genitalia (Fig. 11) similar to those of *portmanni* (Fig. 1); Central and western Mexico ..... *dispar* Sharp<sup>1</sup>
- 5'. Elytra without definite melanic pattern; sometimes clouded ..... 6
- 6(5'). Dorsum light reddish brown, narrowly darker along suture and bases of elytra; male external genitalia similar to those of *portmanni*, but aedeagus broader (Fig. 8); total length about 2 to 2.2 mm; Panama, Guatemala, eastern and western Mexico ..... *bryantstoni* (Clark)
- 6'. Parts of head and pronotum usually darkly pigmented, contrasting with the lighter bases of the elytra ..... 7
- 7(6'). Size smaller, about 1.6 to 2.0 mm in total length; male external genitalia with aedeagus narrowed toward apex (Fig. 12); Central and Western Mexico ..... *decorosus* sp. nov.
- 7'. Size larger, total length 2.1 to 2.7 mm; male external genitalia with aedeagus (Fig. 7) broad, similar to that of *bryantstoni*; Central and Western Mexico ..... *zethus* sp. nov.
- 8(1'). Size small, total length about 1.4 mm; head, underside, and appendages light reddish brown; pronotum similar, but darker along base; elytra very dark, almost black with indefinite reddish spots  
along base; male external genitalia similar to other species of subgenus (Fig. 10); Brasil, Goias *goias* sp. nov.
- 8'. Larger, usually over 2.0 mm in total length; elytra not very dark or with a melanic pattern against a lighter background ..... 9
- 9(8'). Similar to *bryantstoni* (Clark) but with pale brown or reddish brown venter; male external genitalia (Fig. 2) diagnostic, the aedeagus distinctively narrowed in middle; Brasil, Bahia .....  
..... *mutata* Sharp
- 9'. Elytra with distinctive melanic pattern, or male external genitalia with aedeagus not narrowed in middle ..... 10
- 10(9'). Elytra with distinctive melanic pattern; total length about 1.9 to 2.1 mm; male external genitalia diagnostic (Fig. 5); widely distributed in Central America and Mexico (*basicollis* Guignot) ..... *variegata* Sharp
- 10'. Elytra without definite melanic pattern, at most with suture and bases of elytra narrowly darkened and base of pronotum dark ..... 11
- 11(10'). Size smaller, total length about 1.75 mm; male external genitalia as in Fig. 4; no distinctive color pattern on pronotum; Panama, Volcano de Chiriqui ..... *specula* Sharp
- 11'. Size larger, about 2.2 mm in total length; color generally reddish brown with narrow darkening along suture and bases of elytra and along base of pronotum; male external genitalia as in Fig. 6; Costa Rica ..... *pitteri* sp. nov.

### *Desmopachria (Portmannia) dispar*

Sharp 1882

*Desmopachria dispar* Sharp, Biologia Centrali-Americana, 1, 2: 17 (Mexico: Cordova, Jalapa, Guanajuata).

**Diagnosis:** Similar to *D. variegata* with reduced color pattern, but larger and with somewhat different male external genitalia (Fig. 11). Clypeal margin broadly truncate in front. Punctuation very similar to that of *D. portmanni*; with head finely but distinctly and sparingly punctate, pronotum with very fine punctures on disk and coarser punctures across front just behind margin and across base and at sides; elytra with fine but distinct punctures at base becoming finer and sparser toward the sides and apically as usual. Under surface predominantly very dark brown or black. A vaguely impressed sutural stria is present in the holotype. Total length about 2.2 to 2.4 mm; greatest width near middle of elytra 1.4 mm.

<sup>1</sup>*Desmopachria niger* Zimmermann probably also belongs here. It is described as follows: Easily recognized by the glossy black coloration. 2 mm; broadly oval, weakly convex, uniformly laquer-like black, only the legs and antennae red. Head anteriorly finely bordered; as the pronotum scarcely visibly punctate; the latter anteriorly little angled, sides feebly rounded, distinctly margined. Elytra without sutural stria and without discal stria of coarser punctures, with sparse and very obsolete punctuation. Undersides smooth. (Translated from the German) Ent. Blatt., 19 (Heft 1) 1923:33 (Brasil: Sao Paulo, Alto da Serra Type in Museu Paulista, Sao Paulo.)

J. Balfour-Browne separates *D. portmanni* and *dispar* largely on the basis of the frontoclypeal margin as follows:

"Fronto-clypeal margin strongly raised and abruptly truncate or even shallowly emarginate in *D. portmanni* in contrast to fronto-clypeal margin moderately raised and roundedly truncate, hardly at all emarginate."

However, the fronto-clypeal differences do not seem to be constant.

Differences in the male external genitalia may be significant (Figs. 1 and 11).

Types in the BMNH.

***Desmopachria (Portmannia) bryantstoni*  
(Clark)**

1862 *Hydroporus bryantstoni* Clark, Ann. Mag. Nat. History, (3) X: 175, (Mexico).

1882 *Desmopachria polita* Sharp, Biologia-Centrali Americana, I. 2: 17, (Mexico).

**Diagnosis:** A moderately large species for the genus about 2 mm long by 1.4 mm wide near middle of elytra. Head with front moderately finely, densely punctate; clypeus finely, but distinctly margined, feebly truncate anteriorly, somewhat indented; clypeal fovea shallow, inconspicuous; surface with reticulate microsculpture except at base. Pronotum finely and shallowly punctate on disk with coarser punctures at sides, along front margin, and along base as usual; posterior margin distinctly doubly sinuate, the outer angles distinctly recurved. Elytra with punctures along suture near base about as coarse as those along base of pronotum, punctures fairly regular, but shallow; discal striae of close set punctures distinct, about 0.32 mm long on each elytra; elytral punctures becoming finer, sparser, and shallower laterally and apically; lateral edges of elytra almost impunctate; epipleura with coarse shallow punctures. Venter with metasternum, hind coxae, and abdomen almost impunctate; penultimate abdominal sternite very convex; last visible sternite feebly transversely impressed. Color of dorsum light reddish brown darkened along elytral suture, and bases; venter largely shining black with appendages, bases of abdominal sternites at sides, and epipleurae light reddish brown. Male external genitalia (Fig. 8) similar in type to those of *D. portmanni*, but with aedeagus (middle lobe) broader; setation or cilia-tions of parameres (lateral lobes) similar to that of *D. portmanni*.

Besides the types in the BMNH, I have seen specimens from Mexico: Sinaloa and San Luis Potosi; Panama and Guatemala.

***Desmopachria (Portmannia) decorosus*  
new species**

**Diagnosis:** A moderately large species 1.6 to 2.0 mm in total length by 1.1 to 1.4 mm in width near middle of elytra. Usually rather brightly marked with dark head and pronotum contrasting to lighter elytra with dark sutural marks and other melanic markings. Male external genitalia proportionately larger than those of most species in the subgenus; aedeagus long, curved (Fig. 12). One of the most attractive members of the subgenus.

**Holotype Male:** Ovate, somewhat flattened. Total length 2.0 mm; greatest width near middle of elytra 1.4 mm; width of pronotum at base 0.86 mm; width of pronotum at apex 0.64 mm; length of pronotum at midline 0.44 mm. Head moderately finely punctate on disk, the punctures separated by 2 to 4 times the diameter of a single puncture; more coarsely and closely punctate in clypeal impression which slants inward over eyes; head along inner margins of eyes with a row of coarser closer punctures very close to the inner edge; some large indefinite punctures on disk; clypeus distinctly margined, feebly truncate anteriorly. Pronotum with discal punctures finer and sparser than on disk of head; coarser and closer punctures along base and just behind anterior margins. Elytra with discal punctures a little coarser than those on head; finer and sparser toward sides and apex; no sutural stria evident; a short discal stria of close, impressed punctures about 0.3 mm long on each elytron. Venter with metasternum, coxal laminae and abdominal sternites very finely and sparsely punctate; last abdominal sternite not conspicuously punctate; prosternal process bifid; metacalcaria not serrate. Color: Head and pronotum reddish brown to dark brown except on either side of head behind clypeus and on sides of pronotum which are lighter; elytra brownish yellow to yellow with dark brown melanic markings forming a distinct stripe along suture and a vague cloud at middle on either elytron. (Pattern variable in series but head and pronotum nearly always darker in part than lightest parts of elytra and pronotum usually darker than base of elytra). Venter with coxal laminae and abdominal sternites very dark, almost black except for part of inner lamina

which are lighter; reddish brown; appendages and prosternum brownish yellow.

**Allotype Female:** Very similar to male except lighter in color both above and below. Neither sex with any evident microsculpture between punctures either above or below. Total length of allotype female 1.6 mm; greatest width of elytron near middle of elytra about 1.28 mm; width of pronotum at base of 0.96 mm; width of pronotum at apex 0.45 mm; length of pronotum at midline about 0.44 mm.

Holotype, allotype and 27 paratypes from: Mexico, Oaxaca, Pond on Highway 190, 16 mi. N.W. Rio Hondo, 12 Sept. 1964, D. Breedlove, California Academy of Science in CAS (California Academy of Science). Other paratypes designated as follows: Mexico, Oaxaca, 8 mi. N. Oaxaca, 12 Dec. 1948, H. B. Leech (CAS). Mexico, Nayarit, Pool in drying stream, 20 mi. S. E. Tepic, 23 Nov. 1948, H. B. Leech, 22 (CAS). Mexico, Nayarit, 25 mi. S. E. Tepic, 23 Nov. 1948, H. B. Leech, 4 (CAS). Mexico, 25 km. S. Tepic, 21-24 Sept. 1953, Borys Malkin, 17 (CAS). Mexico, Nayarit, San Blas, 17-21 Sept. 1953, Borys Malkin, 3 (CAS). Mexico, Mexico, Real de Arriba, Temescaltepec, 5 June 1933, H. E. Hinton and R. L. Usinger, 7 (BMNH). Mexico, Jalisco, flood pools 17 mi. S. Maxamitla, 5 Dec. 1948, H. B. Leech, 6 (CAS); Mexico, Jalisco, silted river 0.5 mi. upstream from Atenquique, 5 Dec. 1948, H. B. Leech, 1 (CAS). Mexico, Nayarit, 18 mi. N.W. of Tepic, 27 Nov. 1948, H. B. Leech, 1 (CAS).

*Desmopachria (Portmannia) zethus*

new species

**Diagnosis:** A large species for the genus 2.1 to 2.7 mm in length by 1.0 to 1.8 mm in greatest width near middle of elytra. Similar to *D. portmanni*, but averaging larger and with distinctive male external genitalia (Fig. 7). Elytral dark pattern diffuse, variable. Clypeus only feebly truncate.

**Holotype Male:** Ovate, somewhat flattened. Total length 2.48 mm; greatest width near middle of elytra 1.68 mm; width of pronotum at base 1.20 mm; width of pronotum at apex 0.8 mm; length of pronotum at midline 0.56 mm. Head with disk moderately closely and coarsely punctate with punctures separated by 1 to 3 times the diameter of a puncture; clypeal impressions distinct, irregular, with closer, coarser punctures in rows along inner border of eyes; clypeal margin fine, just perceptibly truncate in front. Pronotum with disk more finely punctate than disk of head with coarser, closer punctures at sides extending inward to join basal

bands of coarser punctures. Elytra with shallow punctures about as on pronotal disk; punctures in irregular rows at base becoming finer and sparser toward sides and apex; a discal stria on each elytron about .08 mm long or less; suture raised but punctures not indented to form a stria. Venter with coxal lamina and metasternum finely, sparsely punctate; abdominal sternites very finely setate punctate; last visible sternite feebly transversely impressed, but not conspicuously punctate. Color: Head dark brown at base with clypeus brownish yellow; pronotum dark brown with reddish cast and brownish yellow on either side; elytra brownish yellow on either side of base and toward sides and epipleura; elytra with dark brown markings near middle, along suture, and toward apex; venter dark reddish brown (darker, almost black in allotype and some paratypes); legs, antennae, and mouthparts reddish brown to brownish yellow.

**Allotype Female:** Similar to male but smaller, total length 2.16 mm; greatest width near middle of elytra 1.5 mm; width of pronotum at base 1.04 mm; width of pronotum at apex 0.72 mm; length of pronotum at midline 0.48 mm. Venter very dark brown, appearing black.

Holotype, allotype, and 3 paratypes from Mexico: Jalisco, 17 mi. S. of Mazamitla, 5 Dec. 1948, H. B. Leech (CAS). Paratypes from Mexico; Nayarit, pool in drying stream bed, 20 mi. S.E. of Tepic, 23 Sept. 1948, H. B. Leech, 3 (CAS). Mexico; Mexico, Tejuipilco (Temescaltepec), July 1933, H. E. Hinton, 1 (BMNH).

*Desmopachria (Portmannia) goias*

new species

**Diagnosis:** A small species, 1.44 mm in length by 1.12 in greatest width at middle of elytra. Head, pronotum, underside, and appendages light reddish brown; elytra very dark almost black with indefinite reddish spots along bases and along edges. Male external genitalia similar to those of other species of *Portmannia* with parameres and aedeagus simple, but the latter about as long as the parameres.

**Holotype Male:** Total length 1.44 mm, greatest width near middle of elytra 1.12 mm; pronotum at base 0.88 mm; pronotum at apex 0.48 mm; pronotum at midline 0.24 mm. Head finely and sparsely punctate except in the clypeal impressions, which are distinct with coarse punctures alongside the eyes and curving inward parallel to the clypeal

margin anteriorly; clypeus distinctly but finely bordered and not truncate nor protuberant anteriorly. Pronotum punctate about as on the disk of head, smooth and shining between punctures; punctures along base and toward sides coarser and irregularly distributed, not conspicuous. Elytra with coarser punctures in more or less regular rows on disk near suture and base, but punctures becoming finer and sparser laterally and toward apices; a fine but distinct discal stria about 1/2 length of elytron present in both male and female, punctures along suture do not form distinct striae. Color: head underside, and appendages, light reddish brown; pronotum also light reddish brown, but darker along base at middle; elytra very dark brown, almost black in dorsal aspect with two reddish brown spots along base, one near the humerus and the other above the epipleura and connected to a vague reddish brown mark down the edge of the elytron; elytral apices also with vague light reddish brown marks.

Holotype and allotype from Brasil, Goias, the holotype from Santa Isabel, Ilha do Bananal, Rio Araguaia, Aug. 1-20, 1957, the female allotype from Goiania, July 12, 1957, both collected by Borys Malkin and both in the FSCA (Florida State Collection of Arthropods).

#### *Desmopachria (Portmannia) mutata* Sharp

1882 *Desmopachria bryantstoni* Sharp nec Clark, Trans. Royal Dublin Society, Ser. 2, 2: 342 (Brasil: Bahia).

1992 *Desmopachria mutata* nom. nov. for *bryantstoni* Sharp nec Clark, Biologia Centrali-Americana, 1, 2: 18 (Brasil: Bahia).

**Diagnosis:** Similar to *bryantstoni* in size (2.0 to 2.2 mm total length) and punctation, but entirely pale beneath, not shining black. Male external genitalia with aedeagus distinctive (Fig. 2).

This seems to be rare in collections. I have seen only the types in the BMNH.

#### *Desmopachria (Portmannia) laevis* Sharp

1882 *Desmopachria laevis* Sharp, Sci. Transactions Royal Dublin Society, Ser. 2, 2: 341 (Santa Rita, Brasil).

**Diagnosis:** A small species about 1.5-1.7 mm. in length, darkly colored and black beneath when mature. Dorsum finely punctate, appearing smooth and shining at lower magnifications. Clypeus not truncate in front. External genitalia of male rela-

tively simple (Fig. 3); with aedeagus broad for nearly its entire length, down curved at tip, appearing notched in ventral view, and parameres curving inward from near middle.

I have seen the types in the BMNH (British Museum [Natural History]) and specimens from Brasil: Maranhao, 30 km west of Caninde, Aldeia Yavaruhu Trail, Feb. 1968, B. Malkin (FSCA).

#### *Desmopachria (Portmannia) sobrina* new species.

**Diagnosis:** A medium sized species for the genus, 1.6 to 1.8 mm in length by 1.2 mm wide at about middle of the elytra. Dorsum very smooth and shining between rather fine, irregular punctures. Similar to *D. laevis* Sharp but smaller with distinctive male external genitalia (Fig. 9).

**Holotype Male:** Ovate, somewhat flattened. Total length 1.8 mm; greatest width near middle of elytra about 1.2 mm; width of pronotum at base 0.88 mm; width of pronotum at apex 0.64 mm; length pronotum at midline 0.28 mm. Head moderately finely punctate on disk, with a few coarser punctures along base; clypeal impression distinct, with coarser punctures slanting inward from above antennal bases; anterior margin of clypeus distinct, but fine and not truncate at middle. Pronotal disk punctate about as on head with coarser punctures along base and anterior edge. Elytra with moderate punctures near base, not in distinct rows except for a discal stria on each elytron about 0.32 mm long; punctures along suture somewhat coarser and more deeply sunken than others, but not forming a distinct sutural stria. Dorsum without visible microsculpture at 90 x magnification between punctures, smooth and shining. Venter with coxal laminae with very fine, shallow punctures, but with some fine, scratch-like sculpture; abdominal sternites also finely, shallowly punctate; last visible sternite with only a few coarser punctures than others. Color: Head yellowish brown, irregularly darker at base. Pronotum yellowish brown, irregularly darker along anterior edge, at base, and on disk. Elytra dark, reddish brown, intensely darker along suture. Venter with costal laminae reddish brown, darker than the yellowish brown sternites. Appendages and mouthparts brownish yellow. (I believe that fully hardened members of this species may be very dark brown, almost black beneath at least on the costal lamina.)

**Allotype Female** very similar to male. Total length 1.6 mm; greatest width near middle of elytra 1.12 mm; width of pronotum at base 0.80 mm; width of pronotum at apex 0.56 mm; length of pronotum at midline 0.28 mm.

Holotype and 3 paratypes from Panama, C. Z., Albrook Forest site, 28 May 1968, ultraviolet light trap, R. S. Hutton; allotype, same data except 20-21 July 1967; 32 paratypes, same data except for various dates in May, June, August, September, and December 1967, and May 1968, in NMNH (U.S. National Museum of Natural History).

***Desmopachria (Portmannia) portmanni*  
(Clark)**

1862 *Hydroporus portmanni* Clark, Ann. Mag. Nat. Hist., Ser. 3, 10: 174 (Mexico).

1882 *Desmopachria portmanni* Sharp, Biologia Centrali-Americana, 1.2: 17 (Mexico).

1917 *Desmopachria portmanni* Zimmermann, Archiv. fur Naturgesch., Abt. A., Heft 12: 1-130 (Mexico).

1955 *Desmopachria portmanni* Young, Bull. Brooklyn Ent. Soc., 59 (4): 110-112 (Arizona, Texas, U.S.A.).

**Diagnosis:** A large species 2 to 2.3 mm in total length by 1.2 to 1.5 mm in greatest width near middle of elytra. Head moderately coarsely punctate with clypeus distinctly truncate or somewhat indented at middle in dorsal aspect. Male external genitalia (Fig. 1) distinctive; aedeagus turned down at apex so that when viewed from below as in copulatory position it may appear indented. Venter black in large part, the appendages and epipleurae reddish brown, brownish yellow. Head moderately punctate, coarsely so in comparison with some species; punctures on disk separated by 2 to 4 times the diameter of a puncture; punctures irregularly distributed on disk. Pronotum finely punctate on disk, more finely punctate than disk of head; coarser punctures in band across behind anterior margin and in band across base; very irregularly punctate at sides. Elytra more coarsely punctate than disk of pronotum on bases, the punctures becoming finer and sparser towards sides and apices; no impressed sutural stria evident, but an impressed discal stria on base on each elytron about 0.24 mm long. Venter with metasternum, coxal laminae and abdominal sternites very finely punctate; last visible abdominal sternite not conspicuously impressed or punctate; some coarser punctures towards side. No conspicuous microsculpture on dorsum or venter. Color somewhat variable, but usually with base of

head dark brown to black with clypeus lighter, pronotum very dark brown or black narrowly across front margin and across base, but lighter brown on disk and usually yellowish brown or brownish yellow at sides; venter with metasternum, coxal lamina, and abdominal sternites shining dark brown or black, the appendages and epipleurae reddish brown or brownish yellow.

The species is distributed in the mountains of western Texas, and Arizona into Sonora, and in San Luis Potosi and Nuevo Leon Mexico. Type in the BMNH.

***Desmopachria variegata* Sharp**

1882 *Desmopachria variegata* Sharp, Biologia Centrali-Americana Coleoptera 1, 2: 16 (Mexico, Cordova; Guatemala; San Geronimo).

**Diagnosis:** A moderate sized species, about 1.9 to 2.09 mm in total length by about 1.28 to 1.44 mm in greatest width near middle of elytra. Head usually dark, and pronotum and elytra with variable dark markings. Male external genitalia distinctive, the aedeagus broad, often bent down at tip suggesting a notched structure in ventral aspect (Fig. 5).

Head with disk finely punctate, the punctures separated by 2 to 3 times the diameter of each puncture; clypeal impressions distinct, deeply impressed with coarser, closely set punctures in several irregular rows extending inward onto disk from above antennae; a row of closely placed coarser punctures along the inner margin of each eye; clypeal margin not truncate in front or only feebly so. Pronotum with punctures on disk about like those on disk of head; coarser punctures in an irregular narrow band just behind front margin; coarser, irregular punctures towards sides, and a band of coarser punctures across base, widest at middle. Elytra with basal punctures, about like coarser punctures on pronotum; punctures in irregular rows; no sutural striae indicated, but a distinct discal stria extends about 0.32 mm toward the apex of each elytron. Venter with metasternum and coxal laminae finely punctate with some irregular polygonic microsculpture shallowly impressed between punctures; abdominal sternites finely punctate; last visible sternite not transversely impressed nor conspicuously punctate. Color variable, but head and base of pronotum usually dark brown and with a dark brown pattern on elytra. Venter reddish brown, possibly darker in more mature specimens; bases of elytra, sides, and epipleurae yellowish

brown; abdominal sternites also often lighter brown or brownish yellow at sides.

This species is common in parts of Mexico and Central America. I have seen specimens from Mexico: Chiapas, Colima, Jalisco, and Sonora in addition to the type locality (Cordoba in Vera Cruz) and from El Salvador, and Honduras.

***Desmopachria (Portmannia) basicollis*  
Guignot**

1949 *Desmopachria basicollis* Guignot, Bull. Soc. ent. Franc, 54: 151 (Costa Rica).

I believe that this species is identical with *D. variegata*. The two have very similar male external genitalia and the dark brown or nearly black head, the dark base of the pronotum, and the variable dark brown markings on the elytra are very similar.

Types in the Museum National d'Histoire Naturelle (Paris) are from Costa Rica. I have seen no specimens as large as cited by Guignot (total length 2.2 to 2.5 mm.)

***Desmopachria (Portmannia?) specula* Sharp**

This species is probably not a member of the subgenus *Portmannia* although the male external genitalia are suggestive of that group.

Total length 1.75 mm; greatest width near middle of elytra about 1.3 mm. Larger and more regularly ovate than *D. circularis* Sharp. Clypeal margin indistinct. Dorsal punctation reduced except for discal stria about one-third of way from suture to lateral margin. No distinctive color pattern on dorsum. Prosternum of type concealed. Genitalia Fig. 4.

Known only from the type from Panama, Volcano de Chiriqui, collected by Champion (in Biologia Centrali-Americana material, BMNH).

***Desmopachria (Portmannia) pittieri*  
new species**

**Diagnosis:** A large, almost unicolorous species, about 2.2 mm long by about 1.4 mm wide at about middle of elytra. Color generally reddish brown both above and below, darker brown along suture of elytra and across bases. Aedeagus of male external genitalia (Fig. 8) longer than in *D. bryanstoni* (Fig. 6).

**Holotype Male:** Ovate, not greatly flattened. Total length 2.2 mm; greatest width near middle of elytra

about 1.4 mm; width of pronotum at base about 0.88; width of pronotum at apex about 0.68 mm; length of pronotum at midline about 0.48 mm. Head finely punctate on disk; clypeal impressions not conspicuous; clypeus margined, but not truncate in front. Pronotum about as finely punctate on disk as head, coarser punctures along anterior margin and on base and sides as usual. Elytra somewhat more coarsely punctate on base; sutural and discal striae lacking or inconspicuous.

Holotype from Costa Rica, from Pitter Collection in BMNH.

***Desmopachria (Portmannia?) nitidissima*  
Zimmermann**

1928. *Desmopachria nitidissima* Zimmermann, Weiner Ent. Zeitung, 44 Band, 304 Heft, p. 171 (Brasil without other locality).

**Diagnosis:** This species should be relatively easy to recognize when it is again discovered. Body form very convex both above and below with elytra and abdomen distinctly attenuate behind. Total length 1.92 mm. Greatest width near bases of elytra 1.36 mm. Pronotum relatively longer on midline than in other species of genus. Width of pronotum at base about 0.82 mm. Width of pronotum at apex about 1.12 mm. Length of pronotum at midline 0.57 mm. (Length of 2 1/8 mm given by Zimmermann appears to be in error.) Integument very smooth, shining, and for most part with inconspicuous punctation. Resembles in this respect species of *Liocanthus* and other noterids, but without coarser elytral discal or other coarse, setate punctures of most noterids. Zimmermann's description: "The whole animal, above as well as beneath, mirror smooth without other sculpture.." seems appropriate. Zimmermann, *l. c.* "Das ganze Tier, sowohl oberseits, Spiegel-Glatt, ohne jegliche Skulptur....", p. 171, lines 11-12 in description of *D. nitidissima*.

Head very finely, sparsely, and indistinctly punctate, punctures on disk and vertex scarcely visible at 90X magnification; clypeal impressions with coarser punctures in close rows slanting inward onto disk from two tiny tubercles, one on either side of clypeus; fine and irregular punctures in rows along inner margins of eyes; clypeus finely but distinctly margined, with margin nearly straight in front (truncate). Head, pronotum, and elytra appearing almost impunctate in comparison to *D. portmannia* and other species of *Desmopachria*. Pronotum similarly punctate to disk of head with inconspicuous coarser

sparser punctures along anterior and posterior margins and at sides. Elytra about as indistinctly punctate as head or pronotum on base, but with some large, shallow, irregular punctures towards apices; no indication of sutural striae and only a vague indication of short, discal striae. Venter with coxal lamina and abdominal stemites punctate about as on disk of head and pronotum without microsculpture between punctures. Prosternum partly concealed by mounting medium, but apparently not bifid. Color: Largely reddish brown above and beneath. (Appendages missing.) Head and pronotum light reddish brown, the pronotum darker along base and lighter yellow brown at sides. Elytra brownish yellow with darker reddish brown areas leaving the margin, an irregular basal fascia, a narrow postmedian fascia, and an expansion at apices lighter. Basal and postmedian fascia do not reach the suture. Venter largely reddish brown.

The type, described above, is in very poor condition lacking appendages, and with head poorly attached. It is possible that parts of different specimens were combined, but the elytra and pronotal outlines match precisely and the punctation seems to be consistent on all parts.

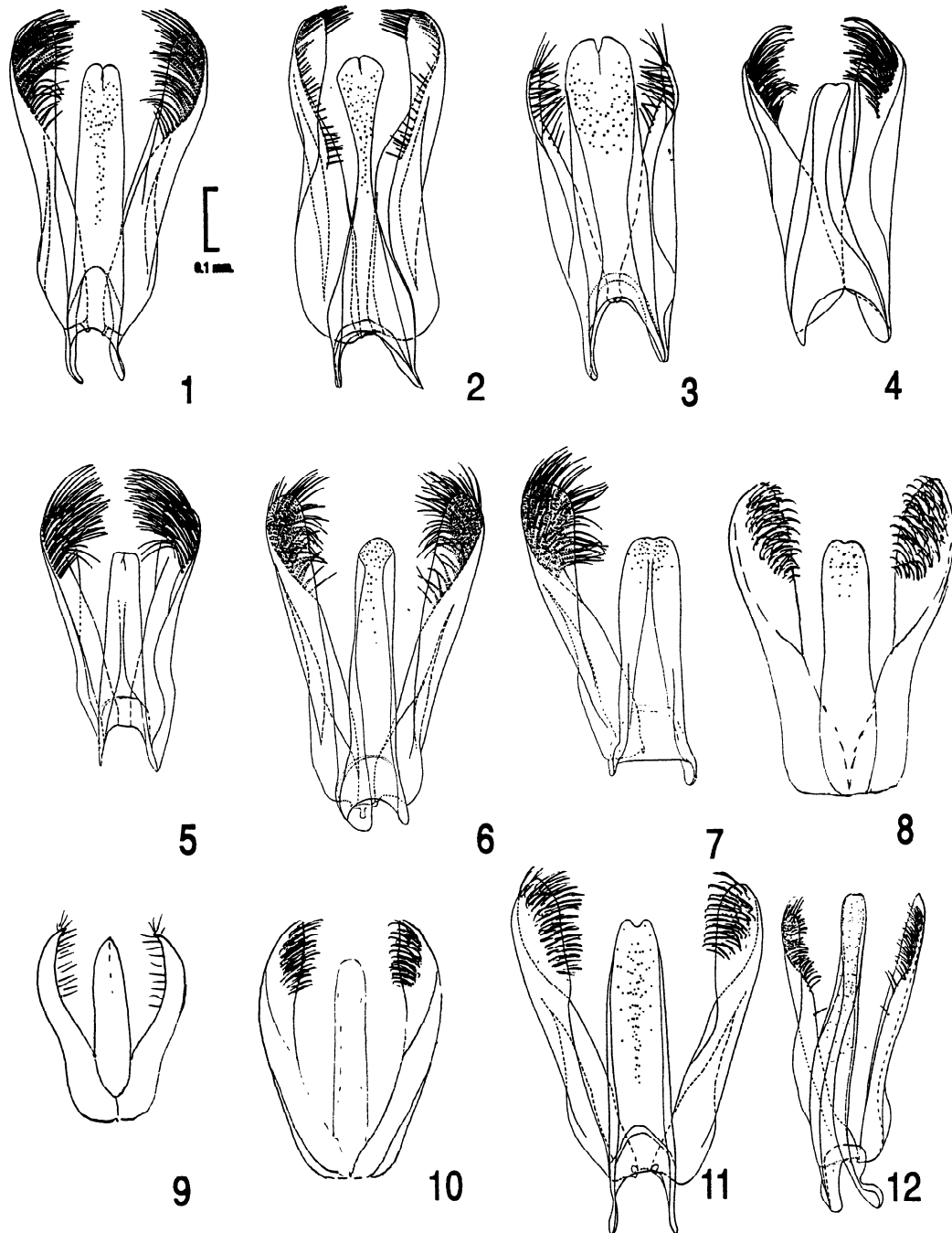
#### Acknowledgments

I wish to acknowledge the help I have received from museum curators and others who have aided me in this study. I especially appreciate the generosity of J. Balfour-Browne who loaned me his camera lucida drawings of male external genitalia.

#### References

- Babington, C.E.** 1941. Dytiscidae Darwinianae; or descriptions of species of Dytiscidae collected by C. Darwin Esq... in South America and Australia during the voyage of H. M. S. Beagle. Trans. Ent. Soc. London 3: 1-17.
- Young, F. N.** 1980. Predaceous water beetles of the genus *Desmopachria* Babington: the subgenera with descriptions of new taxa (Coleoptera: Dytiscidae) Rev. Biol. Trop. 28(2): 305-321, 51 figs.





**Figs. 1-12:** (Camera lucida drawings by J. Balfour-Browne) **Fig. 1.** Male external genitalia of *Desmopachria (portmannia) portmanni* (Clark) ventral aspect of parameres and aedeagus in copulatory position. **Fig. 2.** Same *Desmopachria (Portmannia) mutata* Sharp. **Fig. 3.** Same *Desmopachria (Portmannia) laevis* Sharp. **Fig. 4.** Same *Desmopachria (Portmannia) specula* Sharp. **Fig. 5.** Same *Desmopachria (Portmannia) variegata* Sharp. **Fig. 6.** Same *Desmopachria (Portmannia) pittieri* Young. **Fig. 7.** Same *Desmopachria (Portmannia) zethus* Young. **Fig. 8.** Same *Desmopachria (Portmannia) bryanstoni* Clark. **Fig. 9.** Same *Desmopachria (Portmannia) sobrina* Young. **Fig. 10.** Same *Desmopachria (Portmannia) goias* Young. **Fig. 11.** Same *Desmopachria (Portmannia) dispar* Sharp. **Fig. 12.** *Desmopachria (Portmannia) decorosus* Young.