

THE STAPHYLINDIAE, COLEOPTERA OF PAKISTAN

Part III.—A key to the genera and species of the Piestinae, Osoriinae, Pseudopsinae and Oxytelinae, with descriptions of new genera, subgenera and species from Karachi.

MOHAMMAD ABDULLAH* and (Miss) NOORUN-NISA QADRI

P.C.S.I.R. Laboratories, Karachi 32

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Keys (with distinguishing characters) are provided for the genera and species of the rove beetle subfamilies Piestinae, Osoriinae (including Leptochirini and Eleusiini), Pseudopsinae and Oxytelinae found or likely to be discovered in West and East Pakistan. The following new taxa of the Oxytelinae are described from material collected in Karachi and subsequently to be presented to the University of Karachi entomological museum: *P. (Pseudopyctocraerus) subgen n.*, *Platystethus (Pseudopyctocraerus) mahmoodi sp. n.*, *Platystethus (Pseudopyctocraerus) tasneemae sp. n.*; *Neopyctocraerus gen n.*, *Neopyctocraerus shafqati sp. n.*; *Neoplatystethus gen. n.*, *N. (Neoplatystethus) subgen. n.*; *Neoplatystethus (Neoplatystethus) hameedi sp. n.*, *N. (Pseudoplatystethus) subgen n.*, *Neoplatystethus (Pseudoplatystethus) meccii sp. n.* *Trogophloeus zahiri sp. n.*, and *Trogophloeus qadrii sp. n.*

Introduction

Little is known about the bionomics of the staphylinid beetles treated in this paper. As far as the habits are concerned, the following associations are established: *Eupiestus* Kraatz, 1859—dead leaves or other vegetable debris, moss, etc.; *Siagonium* Kirby and Spence, 1815—under the bark of trees; *Holosus* Motschoulsky, 1857—in decaying tree—trunks; *Tetrapleurus* Bernhauer, 1914—subcortical; *Eleusis* Castelnau, 1835—subcortical; *Leptochirus* Germ., 1823—subcortical, feeding on woody fibre; *Osorius* Latreille, 1829 in decaying tree-trunks, also on the sandy banks of streams; *Mimogonus* Fauvel, 1903—in rotten tree trunks, also in tobacco; *Holotrochus* Erichson, 1840—in decaying tree trunks; *Planeustomus* Jacqu. du Val, 1859—in damp places in galleries, frequently attracted to light, *Ancyrophorus* Kraatz, 1858—near water; *Carpelinius* Samovalle, 1819—*Trogophloeus* Mannerheim, 1830—in damp places and near water; *Oxytelopsis* Fauvel, 1895—in debris and damp places; *Delopsis* Fauvel, 1895—in damp debris; *Oxytelus* Gravenhorst, 1802—in dung, carrion, rotting fungus and fruits, under ground in the nests of mammals, etc.; *O. myrmecophilus* Cameron—with *Phidologition diverssus* Jerd. as scavenger; *Platystethus* Mannerheim, 1830—in dung, decaying matter and rotting fruits; *Bledius* Mannerheim, 1830—near water and on light; *Thinobius* Kiesw., 1844—near fresh or salt water; and *Neopyctocraerus* Abdullah and Qadri and *Neoplatystethus* Abdullah and Qadri—in rotting fruits (banana, orange and papaya kept at this institution)—*vide infra*.

Piestinae

(a) A key to the genera and species of West Pakistan (Cameron, 1930):

*Present Address: P.O.Box 266, Damman, Saudi Arabia.

1. Elytra each with four keels, the sutural and the humeral united in an arch behind the the discal ones *Tetrapleurus* Bernhauer, 1914 vertex of head not sulcate, rather closely and coarsely punctate like the rest of the surface

T. himalayicus Cameron,
1924

Elytra without such keels 2

2. Tarsi 5-segmented; elytra without sub-humeral stria 3

Tarsi 4-segmented; elytra with a fine stria passing from the shoulder to the apical border *Pseudolispinodes* Bernhauer, 1926 black moderately shining, coriaceous, elytra pitchy, posterior margins of the abdominal segments narrowly rufescent, antennae and legs reddish testaceous

P. bistriatus (Fauvel, 1895)

Cameron, 1930

3. Abdomen striate at the sides; maxillary palp with the fourth segment elongate; more or less convex species with the facies of certain Tachyporinae *Holosus* Motschoulsky, 1857 elytra sparingly obsolete punctate

H. brevipennis Fauvel, 1904

Abdomen rarely striate at the sides; maxillary palp with the fourth segment less elongate; more or less parallel, depressed or sub-depressed species; middle and posterior tibiae finely spinose or setose externally *Lispinus* Erichson, 1840 4

4. Pronotum without median impressions before the base, lateral impressions broader and less deep; pronotum less finely and more closely punctured; elytra less sparingly punctured

L. quadricollis Cameron, 1924

Pronotum with more or less distinct median impressions 5

5. Finely coriaceous species; closely and strongly punctured *L. beasoni* Cameron, 1924. Strongly cariaceous depressed species; smaller, 2.2 mm.; lighter and more finely punctured species
L. lyeri Bernhauer, 1914

Kasule (1966:268) considers *Lispinus* Erichson a genus of the Osoriinae on the basis of larval structures. This view may be supported by the adults also but we are not definitely aware of that.

(b) *A key to the genera and species of East Pakistan* (Cameron, 1930):

1. Abdomen bordered.....2
Abdomen not bordered; tarsi 4 segmented; elytra with a fine stria passing from the shoulder to the apical border
Pseudolispinodes Bernhauer, 1926
black, moderately shining, coriaceous; elytra pitchy; posterior margins of the abdominal segments narrowly rufescent, antennae and legs reddish testaceous
P. bistriatus Cameron, 1930
2. Pronotum keeled; tarsi 5 segmented; scutellum concealed *Eupiestus* Kraatz, 1959 3
Pronotum not keeled 6
3. Penultimate segments of the antennae distinctly longer than broad 4
Penultimate segments of the antennae not longer than broad; species rather shining 5
4. Size longer, 8-9 mm.; head in male armed
E. spinifer Fauvel, 1859
Size smaller, 3 mm.; head in male unarmed
E. angulatus Fauvel, 1902
5. Penultimate segments of the antennae strongly transverse; the anterior keels of pronotum united in front; head broader, much more finely punctate; pronotum broader, abruptly constricted at the base; keels less elevated, less sharp; puncturation of the fossae finer
E. sculpticollis Kraatz, 1859
Penultimate segments of the antennae less strongly transverse; the anterior keels of the pronotum scarcely united in front
E. sikkimi Fauvel, 1902
6. More or less oblong or oval species; the elytra extending beyond the 3rd ventral segment of the abdomen; antennae scarcely clavate; 4th tarsal segment dilated
Apatelica Westw., 1848 7

Elongate depressed species; the elytra not extending to the 3rd ventral segment of the abdomen
Siagonium Kirby & Spence, 1815 head large, scarcely or not at all constricted behind; the neck thick and inserted in the thorax; eyes rather prominent
S. indicum Fauvel, 1902

7. Species entirely or in great part black; striae on the elytra finely punctate 8

Species in part metallic, striae of the elytra moderately coarsely punctate 11

8. Antennae with first 5 segments reddish; anterior angles of the thorax completely rounded
A. rotundicollis Fauvel, 1904

Antennae black, the 10th and 11th segments often reddish; anterior angles of the pronotum distinct 9

9. Entirely black species; pronotum not umbonate penultimate segments of antennae as long as broad 10

Black, a spot near the eyes, prosternum, reflexed margin of the elytra; and abdomen in great part reddish; pronotum umbonate
A. sikkimi Fauvel, 1895.

10. Pronotum coarsely, closely, and uniformly punctate, except the lateral explanate margin; sides quite straight for the anterior two-thirds
A. javanica Sharp, 1892

Pronotum behind with large, irregular, impunctate spaces otherwise rather closely punctate; sides feebly rounded for the anterior two thirds
A. intermedia Cameron, 1930.

11. Pronotum unicolours black 12

Pronotum with the explanate margins distinctly rufo-testaceous; elytra metallic, coppery, blue or green; antennae reddish testaceous
A. lebioides Westw., 1848

12. Thorax (pronotum)* with irregular impunctate spaces; tarsi reddish yellow; postero-external angle of the elytra rounded; antennae reddish-yellow; striae less finely punctured
A. viridipennis Fauvel, 1895

Thorax (pronotum)* uniformly closely and coarsely punctured (except the explanate margin); antennae with the first 4 segments black (rest wanting); tarsi pitchy
A. caeruleipennis Cameron, 1930

*By thorax is meant pronotum in this paper.

V. Osoriinae (including Leptochirini and Eleusiini)

(a) *Osoriinae of West Pakistan: Leptochirini of West Pakistan*

There is only one genus *Priochirus* Sharp, 1887 with one species *P. (Plastus) kuluensis* Bernhauer, 1914 here.

Eleusiini of West Pakistan

There is only one genus *Eleusis* Castelnau, 1835 with four species, separated as follows (Cameron, 1930).

1. Species in great part reddish or reddish testaceous, minute species, length 1.5 mm

E. fusiceps Kraatz, 1859

Species dark; the disc of the elytra often reddish or reddish testaceous 2

2. Elytra yellow, the posterior margin rather narrowly and rather sharply black

E. humilis Erichson, 1840

Elytra otherwise coloured 3

3. Larger, $3\frac{1}{2}$ — $4\frac{1}{2}$ mm; head quadrate moderately closely punctate

E. beesoni Cameron, 1930

Smaller, $2\frac{1}{2}$ — $2\frac{3}{4}$ mm. head as broad as the thorax, less punctate; penultimate segments of antennae distinctly transverse; ground sculpture coarser

E. secreta Cameron, 1930

A key to the remaining genera and species of the Osoriinae of West Pakistan

(Cameron, 1930):

1. Anterior tibiae strongly dentate and spinose
Osorius Latreille, 1829 3

Anterior tibiae not dentate, usually spinose; last segment of the maxillary palp not subulate 2

2. Body covered with a sparing coarse pubescence
Mimogonus Fauvel, 1889 Cameron, 1930

Body at least the foreparts glabrous

Body at least the foreparts glabrous *Holotrochus* Erichson, 1889 smaller (2 mm.); elytra extremely finely irregularly punctate

H. chalterjeei Cameron, 1930

3. Thorax before the base suddenly constricted; elytra rather closely and deeply punctate

O. puncticollis Kraatz, 1859

Thorax before the base gradually narrowed; smaller (4 to 4.3 mm.); anterior border truncate or feebly rounded

O. rufipes Motschoulsky, 1857

(b) *Osoriinae of East Pakistan: Leptochirini of East Pakistan* (Cameron, 1930):

1. Anterior coxae separated, the prosternal process dilated behind at its apex *Leptochirus* Germ; 1823; median frontal furrow is absent; prosternal process being dilated behind the coxae into a rounded plate *L. (Strongylochirus)* 3

Anterior coxae contiguous; the prosternal process concealed and not expanded behind 2

2. Mandibles much elongated, projecting considerably beyond the level of the apices of the frontal horns; longer than the head; inner lobe of maxilla densely ciliate

Borolinus Bernhauer, 1903 5

Mandibles normal not produced much beyond the level of the apices of the frontal armature shorter than the head; inner lobe of the maxilla furnished with spines

Priochirus Sharp, 1887 6

3. Clypeus continuous with the front on the same plane and not separated from it by a transverse impressed line, its sides not bounded by an impressed line; thorax red

L. (S.) quadridens Motschoulsky, 1857

Clypeus depressed not on the same plane as the front and separated from it by a transverse impressed line, the entirely black species 4

4. Sixth segment of antennae distinctly longer than broad; size smaller, 13 to 17 mm.

L. (S.) laevis Castelnau, 1840

Sixth segment of antennae distinctly longer than broad; size larger, 20 to 25 mm.

L. (S.) atkinsoni Fauvel, 1895

5. Right mandible behind the apex with a strong simple tooth which is not pointed flat apically; thorax strongly transverse; species entirely black

B. sikkimensis Bernhauer, 1919

Right mandible behind the apex with a bicuspid tooth; species black

B. minutus (Castelnau 1840) Cameron, 1930

6. Front margin of the head with a more or less distinct tooth in the middle

P. (Tricanthochirus) Bernhauer 9

Front margin of the head without tooth in middle 7

7. Head in front divided by a deep, narrow median impression into two large lobes, often themselves dentate

P. (Cephalomerus) Bernhauer 10

Head with a frontal impression which is at least as broad as long 8

8. Front of head unarmed not produced on either side of the impression into a lobe or horns

P. (Leptarthrus) Bernhauer 14

Front of head armed; the long axis of the large frontal horn lies nearer to the side-margin than to the middle line.

P. (Plastus) Bernhauer 15

9. Broader species; the median tooth cylindrical with rounded apex

P. (T.) apicalis (Epp. 1895)
Cameron, 1930

Narrower species; median tooth narrowed before the apex, which is pointed

P. (T.) bipunctatus (Fauvel, 1895)
Cameron, 1930

10. Large species 16 to 23 mm 11

Smaller species 6 to 10.5 mm 12

11. Penultimate segments of antennae longer than broad

P. (C.) bifoveatus (Epp. 1895)
Cameron, 1930

Penultimate segments of antennae transverse

P. (C.) colossalis Bernhauer, 1927

12. First segment of antennae impressed at the apex, which is emarginate 13

First segment of antennae longitudinally sulcate throughout; species dark ferruginous red; the elytra black with the base narrowly reddish

P. (C.) rubiginosus Cameron, 1930

13. Penultimate segments of antennae fully as long as broad; entirely red species

P. (C.) combustus (Fauvel, 1902)
Cameron, 1930

Penultimate segments of antennae transverse; front of head on each side with two distinct pointed teeth

P. (C.) hoplites Fauvel, 1895

14. Species with distinct coriaceous ground sculpture, less shining; antennae longer; length 10.5-11 mm. *P. (L.) longicornis* (Fauvel, 1865)
Cameron, 1930

Species without ground sculpture, more shining; antennae shorter; length 9 mm.

P. (L.) micrognathus (Fauvel, 1902)
Cameron, 1930

15. Anterior margin of the frontal impression with two small teeth or tubercle; free inner edge of the large frontal tooth nearly as long as the distance between the apices of these teeth

P. (P.) evcerus Cameron, 1930

Anterior margin of the frontal impression without teeth 16

16. Larger species (11 mm.); the free inner edge of the frontal horn much shorter than the side of the frontal impression; interval between the horns narrower and deeper; antennae longer, the penultimate segments less transverse; sides of thorax more finely punctured

P. (P.) ascendens (Fauvel, 1903)
Cameron, 1930

Smaller species (7 to 8.5 mm) 17

17. Free inner edge of frontal horn longer; infra cornual denticle larger and further from the apex; length 8.5 mm.

P. (P.) sikkimensis Cameron, 1930

Free inner edge of frontal horn very short; infra cornual denticle very smaller and placed immediately behind the apex; length 7 mm.

P. (P.) gardneri Cameron, 1930

The following species likely to be found in East Pakistan has not been incorporated in the above key:

Thoracochirus denticollis Cameron, 1945, Proc. R. ent. Soc. London (B) 14:64 (Bengal).

Eleusiini of East Pakistan

Three species of *Elusis* Castelnau, 1835 are separated as follows (Cameron, 1930):

1. Sides of the thorax with a distinct tooth; smaller, 4½ mm.; head orbicular; thorax scarcely broaden than long

E. rotundiceps Fauvel, 1904

Sides of the thorax without or with very obsolete tooth 2

2. Elytra black, with large, sharply defined yellow marking on each disc

E. plagiata Fauvel, 1904

Elytra yellowish-brown or reddish. Male; head subquadrate; the eyes as long as the post-ocular region. Female; head suborbicular; eyes more prominent, as long as the post-ocular region

E. viridans Fauvel, 1895

A key to the remaining genera and species of the Osoriinae of East Pakistan

(Cameron, 1930):

1. Anterior tibiae strongly dentate and spinose
Osorius Latreille, 1829 2

Anterior tibia not dentate, usually spinose; body covered subulate with a sparing coarse pubescence
Mimogonus Fauvel, 1903

Entirely black colour moderately shining; large size (4.5 mm.), antennae and legs dark brown
M. niger Cameron, 1930

2. Thorax before the base suddenly constricted 3

Thorax before the base gradually narrowed 5

3. Front margin of the head distinctly crenulate 4

Front margin of the head not crenulate; head not striate, but with more or less vermicular impressions
O. calvus Eppelshein, 1895

4. Head between the eyes uniformly striate; the vertex smooth; thorax less closely and more irregularly punctate, more strongly constricted (Over 7 mm.)
O. sikkimensis Bernhauer, 1918

Head finely striate near the eyes only, behind the antennal tubercle punctate; the vertex smooth
O. gradneri Cameron, 1930

5. Front margin of the head crenulate; clypeus emarginate; thorax more closely punctate
O. lopchuensis Cameron, 1930

Front margin of the head not crenulate; anterior border of head emarginate inter stiae of head sharper; thorax more finely punctate without trace of ground sulpture

O. nilgriensis Fauvel, 1903

VI. Pseudopsinae

(a) *Pseudopsinae of West Pakistan*

There is only one genus, *Pseudopsis* Newman, 1834 with one species, *P. sulcata* Newman, 1834 found in West Pakistan.

The group has not been recorded from East Pakistan.

VII. Oxytelinae s. str.

(a) *A key to the genera and species of West Pakistan* (Cameron, 1930):

1. Tarsi 2-segmented; prothorax without epimera; elytra dehiscent
Thinobius Ksw., 1844

Head smaller than the thorax, with rounded sides
T. (*Thinobius*) 17

Tarsi 3—or 5—segmented 2

2. Tarsi 3 segmented 3

3. Anterior and middle tibiae strongly spinose externally 4

Anterior and middle tibiae ciliate, at most with two small spines before the apex 14

4. Cylindrical species with geniculate antennae 5

Species not cylindrical, antennae normal 6

5. Paraglossae well developed, labial palp with first segment very thick, second narrower, third oval, truncate at base and apex, fourth a little shorter than third; pronotum with base not much narrower than apex, sides rounded; front tibiae with two rows of spines
Bledius Mannerheim, 1830 21

Paraglossae absent; labial palp with second segment thicker than first, third conical; maxillary palp with third segment thickened throughout, sub cylindrical, fourth less than half of third; pronotum with base nearly half as wide as apex, sides parallel except near base where they converge; front tibiae with more than two rows of spines (Abdullah & Qadri, 1968)

Neobledius Abdullah & Qadri, 1968

Light brown to dark brown, eyes black, head and pronotum fuscous; pronotum with a few coarse punctures

N. karachiensis Abdullah & Qadri, 1968

6. Epimera of prothorax absent 7 Brown to brownish-black with legs yellow
N. shafqati **sp. n.**
- Elytra not dehiscent, the sutural angle not broadly rounded; epimera of the prothorax well developed *Oxytelus* Gravenhorst, 1802 29
7. Front coxae elongate, as long as the femora; abdominal segments normally exposed
Platystethus Mannerheim, 1830 8
- (a) Head not constricted behind
P. (Platystethus).
- (b) Head constricted behind; apical segment of maxillary palp conical, about half as long as penultimate segment; paraglossae distinct
P. (Pycnocraerus)
- (c) Head constricted behind; apical segment of maxillary palp subulate, slightly longer than penultimate segment; paraglossae not distinct
P. (Pseudopycnocraerus)
subgen. n. 11
- Front coxae shorter than the femora; apical abdominal segments telescoped 12
8. Species with the characters of 7a or 7b 9
- Species with the characters 7c 11
9. Head not coriaceous 10
- Head, pronotum and elytra coriaceous; pronotum medially sulcate
P. cornutus Gravenhorst, 1802
10. Pronotum bright reddish-testaceous
P. indicus Cameron, 1930
- Pronotum black or pitchy; frontal horns black; elytra largely infuscate, finely and sparingly punctate
P. crassicornis Motschoulsky, 1857
11. Pronotum broadly, weakly emarginate at apex, sides less rounded, medially sulcate at base (fig. 1); scutellum rounded at apex; brown
P. (P.) mahmoodi **sp. n.**
- Pronotum rounded at apex, sides more rounded, medially sulcate throughout (fig. 3); scutellum pointed at apex; brownish-black
P. (P.) tasneemae **sp. n.**
12. Pronotum with sides emarginate or concave near base, base less than half in breadth than apex (fig. 8); gular plate inverted funnel-shaped; larger (length 2.5 mm)
Neopycnocraerus **gen. n.**
- Pronotum with sides rounded at and near base, base more than half in breadth than apex (figs. 14, 20); gular plate triangular; smaller (length 1 mm.)
Neoplatystethus **gen. n.** 31
13. Head less than twice longer than pronotum; third segment of maxillary palp less narrower at base (fig. 13); pronotum with apex nearly straight or broadly, weakly emarginate, sides more rounded (fig. 14)
N. (Neoplatystethus) **subgen. n.**
- Fuscous *N. (N.) hameedi* **sp. n.**
- Head nearly twice longer than pronotum; third segment of maxillary palp more narrower at base (fig. 19); pronotum with apex wavy, sides less rounded (fig. 20)
N. (Pseudoplatystethus) **subgen. n.**
- Fuscous *N. (P.) meccii* **sp. n.**
14. Fourth segment of maxillary palpi minute; mandibles not prominent the apex slightly or moderately bifid
Trogophloeus Mannerheim, 1830 66
- Fourth segment of maxillary palp normal 15
15. Tibiae sulcate; rugose species 16
- Tibiae not sulcate; species not rugose
Ancyrophorus Kraatz, 1856-58 62
16. Antennae short clavate 64
Oxytelopsis Fauvel, 1895
- Antennae elongate, not clavate
Delopsis Fauvel, 1895 65
17. Elytra obscure testaceous; antennae testaceous, the penultimate segments a little infuscate; thorax pitchy brown
T. (T.) simaensis Cameron, 1930
- Elytra black or pitchy brown, antennae dark 18
18. Temple about as long as the eyes 19
- Temple obviously shorter than the eye
T. (T.) pruinosus Cameron, 1924
19. Elytra twice as long as the thorax; penultimate segments of the antennae about as long as broad
T. (T.) himalayicus Cameron, 1924

Elytra one-half longer than the thorax; penultimate segments of the antennae distinctly longer than broad
T. (T.) antennarius Cameron, 1924
 1924

20. Sides of thorax crenulate-*C. (Goprophilus)* Ganglbauer: Species much more shining, with slight metallic reflex; antennae blackish, the second segment longer; head convex; thorax oblong, convex finely punctate
C. (C.) alticola Fauvel, 1829

Sides of thorax even

C. (Zonoptilus)

Entirely black, legs pitchy

C. (Z.) burphuensis Champion,
 1925

21. Clypeus bidentate or bituberculate in front; first segment of the antennae very long (especially in male); mandibles long and slender, each with a tooth in the male, edentate in female
B. (Pucerus) Muls. & Rey 29

Clypeus unarmed (except in *bispinus*); first segment of antennae normal; mandibles shorter and stouter dentate 22

22. Antennal tubercles much elevated, compressed auricular or lamellate

B. (Elbidus) Muls. & Rey

Pitchy red, elytra brownish-yellow moderately shining; thorax and elytra moderately strongly and moderately closely punctate; antennae reddish, the first segment and the legs testaceous, length 4 mm. *B. (E.) taruensis* Cameron, 1920

Antennal tubercles normal

B. (Hesperophilus) & B. (Blediodes)
 Muls. & Rey 23

23. Elytra at least in part testaceous 24

Elytra entirely black or brown 25

24. Elytra unicolourous reddish yellow
B. (B.) beasoni Cameron, 1930

Elytra testaceous, the base and suture very narrowly blackish

B. (B.) dilutipennis Motschoulsky,
 1857.

25. Reddish brown shining species
B. (H.) lucidus Sharp, 1874.

Black partly opaque species 26

26. Thorax entirely opaque finely and closely granular 27

Thorax opaque in front and granular, at the base and posteroexternally shining and coriaceous; antennae infuscate

B. (B.) champion Bernhauer,
 1926.

27. Antennae entirely testaceous; elytra one half longer than the thorax, distinctly longer than broad, very finely and closely punctate

B. (B.) indicus Cameron, 1930

Antennae largely infuscate

B. (B.) fuscicornis Cameron, 1930

28. Elytra entirely pitch-black

B. (P.) verres varmonachus
 Cameron, 1930.

Elytra at least in part testaceous, pitchy black, with large testaceous mark occupying the posteroexternal area from the apex of the suture to the middle of the outer margin

B. (P.) transversus Cameron, 1930

29. Sides of the thorax crenulate or denticulate
O. (Oxytelus) 32

Sides of the thorax even, at least in front 30

30. First segment of the antennae elongate; distinctly constricted before the apex 31

31. Eyes with fine facets
O. (Tanycraerus) 54

Eyes with coarse facets
O. (Caccoporus) 60

First segment of the antennae not constricted before the apex *O. (Anotylus)* 35

32. Head and thorax bronze-green
O. (O.) aeneotinctus Cameron, 1930

Head and thorax otherwise coloured 33

33. Elytra black or pitchy 34

Elytra yellow; antennae black, the first or first and second segments more or less testaceous
O. (O.) ordidus Cameron, 1930

34. Sides of thorax strongly denticulate, length 4 mm. *O. (O.) hirtulus* Eppelsheim, 1895.

Sides of thorax finely crenulate; length 2.75 to 3 mm. *O. (O.) cribrum* Fauvel, 1905

35. Species in great part black or pitchy 36
Species in great part red of reddish testaceous 49
36. Fourth segment of antennae small, moniliform or transverse 37
Fourth segment of antennae at least as long as broad; head on side finely striate, almost impunctate, postero-externally strongly rugose; clypeus sculptured; species less shining; the penultimate segments of the antennae less transverse
O. (A.) frater Cameron, 1930
37. Legs more or less pitchy 38
Legs entirely testaceous 39
38. More shining; elytra entirely black
O. (A.) cephalotes Eppelsheim, 1895
Opaque; elytra with reddish markings behind
O. (A.) megacephalus Fauvel, 1904
39. Anterior tibiae emarginate before the apex 40
Anterior tibiae not emarginate 43
40. Clypeus shining; smaller (2.5 to 3 mm.) and narrower; more shining
O. (A.) nitidulus Gravenhorst, 1802
Clypeus opaque 41
41. Larger (3 to 4.5 mm.); base of head without foyeae
O. (A.) opacellus Cameron, 1930
Smaller (1.8 to 3 mm.) 42
42. Thorax finely striate, impunctate; smaller (1.8 to 2.2 mm.)
O. (A.) occultus Cameron, 1930
Thorax punctate striate; larger (3 mm.)
O. (A.) masuriensis Cameron, 1930
43. Intra-ocular ridge distinct and continued back to the base of head
O. (A.) latiusculus Kraatz, 1859.
Intra-ocular ridge indistinct, not continued to the base 44
44. Clypeus obviously more shining than the rest of the head, practically devoid of sculpture 45
Clypeus not to scarcely more shining than the rest of the head, distinctly sculptured 46
45. Thoracic ridges sharp and distinct; penultimate segments of antennae more transverse
O. (A.) intermedius Cameron, 1930
Thoracic ridges indistinct, penultimate segments of antennae less transverse
O. (A.) myrmecophilus Cameron, 1913.
46. Thoracic ridges indistinct, not more shining than the rest of the surface; clypeus slightly more shining than the rest of the head finely striate
O. (A.) simlaensis Cameron, 1930.
Thoracic ridges sharp and distinct, more shining than the rest of the head, finely striate 47
47. Vertex of head with small shining plaque on each side thoracic ridge obviously more shining than the rest of surface
O. (A.) pygmaeus Kraatz, 1859.
Smaller (1.75 mm.); antennae thinner, the base more less testaceous
O. (A.) pauper Cameron, 1930
48. Large (2.75 mm.); antennae stouter, the base black
O. (A.) pumloides Cameron, 1930
Smaller (1.75 mm.); antennae thinner, the base more or less testaceous
O. (A.) pauper Cameron, 1930
49. Head deep black, shining
O. (A.) alternans Cameron, 1930
Head pitchy or red 50
50. Head simply punctate, not at all coriaceous larger (3 to 3.75 mm.)
O. (A.) laetus Cameron, 1930
Head striate or striate-punctate 51
51. Head distinctly striate or rugose internal to the intra-ocular ridge 52
Head punctate, scarcely striate internal to the ridge, pitchy black
O. (A.) nitidifrons Woll., 1871
52. Vertex of head sparingly punctured not striate
O. (A.) ruber Cameron, 1930
Vertex closely striate or striate-punctate 53
53. Larger (3.2 mm.) more shining, sculpture coarser
O. (A.) rubidus Cameron, 1930
Smaller (2.1 mm.) less shining, sculpture finer
O. (A.) rubicundus Cameron, 1930

54. Femora black or pitchy; large species (4.5 to 5 mm); thorax at the sides rugosely punctate; elytra coarsely striate punctate
O. (T.) robustus Schubert, 1906
- Femora testaceous 55
55. Thorax (pronotum) five sulcate 56
- Thorax three-sulcate 57
56. Posterior angles of the thorax prominent, obtuse; elytra testaceous, the base and side more broadly, the suture and apex more narrowly blackish; length 5.2 mm
O. (T.) almorensis Cameron, 1930
- Posterior angles of the thorax rounded, not prominent; smaller (4 mm); head smaller rather closely punctate *O. (T.) discalis* Cameron, 1930
57. Clypeus not coriaceous; small (2.75 mm.); elytra simply punctate
O. (T.) faetidus Cameron, 1930
- Clypeus distinctly coriaceous 58
58. Fourth segment of the antennae as broad as the fifth, the penultimate segments scarcely transverse
O. (T.) megaceros Fauvel, 1895
- Fourth segment of the antennae small, narrower than the fifth, the penultimate segments distinctly transverse 59
59. Elytra simply punctate
O. (T.) pallidipennis Cameron, 1930
- Elytra punctate striate; thorax scarcely impressed at the sides, posterior angles rounded
O. (T.) micans Kraatz, 1895
60. Sub-opaque species, last segment of the antennae short, conical, as long as the two preceding together; smaller, 5 mm
O. (C.) bengalensis Erichson, 1840
61. Thorax clear reddish-testaceous, the base and posterior two thirds of the sides narrowly black
O. (C.) nigriceps Kraatz, 1895
- Thorax black or pitchy
O. (C.) varipennis Kraatz, 1895
62. Suture dehiscent behind, the sutural angle of the elytra, elytra broadly rounded
A. (Misancyrus) Gozis
- Smaller size (4.3 mm.) uniformly deep black colour, more shining surface; more distinct, stronger, and more sparing puncturation; smaller eyes and longer temples; elytra much longer, more than twice as long as the thorax much longer than broad *A. (M.) championi* Bernhauer, 1926
- Suture not dehiscent, the sutural angle of the elytra not or scarcely rounded
A. (Anchyrophorus) 63
63. Larger (4.5 mm.); the penultimate segments of the antennae as long as broad; legs testaceous, the tibiae a little infuscate
A. (A.) nitidus Cameron, 1924
- Smaller (3.2 mm.); the penultimate segments of the antennae transverse; legs pitchy
A. (A.) nitidus Cameron, 1924.
64. Temples diverging behind and then obliquely truncate to the neck; length 3.5 mm.
O. pseudopsina Fauvel, 1895
65. Species entirely black; larger (4.5 to 5 mm.); antennae slender, the penultimate segments scarcely longer than broad, obconical
D. seticornis Fauvel, 1895
- Thorax ferruginous-red; elytra brown; smaller distinctly transverse
D. indicus (Bernhauer, 1926)
 Cameron, 1930
66. Thorax with a deep arcuate or horseshoe shaped impression, open in front, at horseshoe shaped with the third segment about as long as the second 67
- Thorax with two or four impressions on the disc, or without impressions 68
67. Abdomen narrowed behind; scutellum visible
T. (Thinodromus) Kraatz
- Antennae shorter, the penultimate segments not longer than broad; head and thorax finely, sparingly punctate
T. (T.) lunatus Motschoulsky, 1857
- Abdomen parallel; scutellum concealed
T. (Carparlimus) Stephens 71
68. Head distinctly constricted behind the temples
T. (Trogophlaeus) Mannerheim, 1830 72
- Head scarcely constricted behind the temples 69

69. Eyes large and prominent *i.e.*, the length of their curve about twice as long as the temple; antennal segments six to ten transverse; elytra a third longer than pronotum

T. (Troginus) Muls. et Rey

Black, greasy lustrous

T. (T.) exiguus Erichson, 1839

Eyes less prominent *i.e.*, the length of their curve nearly as long as the temple or tempora; antennal segments six to ten not much transverse; elytra twice as long as pronotum 70

70. Aedeagus with the lateral lobes long *i.e.*, extending much beyond the median lobe (fig. 26)

T. zahiri sp. n.

Aedeagus with the lateral lobes short *i.e.*, not extending beyond the median lobe (fig. 30)

T. qadrii sp. n.

71. Fore-parts moderately finely, closely punctate

T. (C.) distinctus Fairmaire, 1854

Fore-parts coarsely and closely punctate

T. (C.) vulneratus Bernhauer, 1926

72. Elytra reddish or reddish yellow 73

Elytra black or brown 78

73. Head and thorax densely and finely granular, opaque *T. (T.) granulatus* Cameron, 1930

Head and thorax normally punctate 74

74. Head large, obviously broader than the thorax *T. (T.) laticeps* Cameron, 1930

Head normal, not or scarcely broader than the thorax 75

75. Head and thorax distinctly coriaceous between the punctures

T. (T.) coriaccus Cameron, 1930

Head and thorax smooth between the punctures 76

76. Curvature of the eye much longer than that of the post ocular region 77

Curvature of the eye as long as or shorter than that of the post ocular region; smaller and narrower (1.5 mm.); postocular region scarcely dilated; antennae shorter

T. (T.) flavipennis Cameron 1930

77. Thoracic foveae scarcely visible
T. (T.) palitans Cameron, 1930

Thoracic foveae distinct; more finely punctate; antennae thinner

T. (T.) gratus Cameron, 1930

78. Fore-parts coarsely and closely punctate; head and abdomen black; thorax and elytra reddish brown, shining, thorax impressed before the base *T. (T.) abnormalis* Cameron, 1930

Fore-parts normally punctate or coriaceous 72

79. Thoracic impressions distinct 80

Thoracic impressions wanting or very indistinct; head and thorax moderately finely, distinctly punctate *T. (T.) vagens* Cameron, 1930

80. More robust; thorax longitudinally impressed on either side of middle

T. (T.) rivularis Motschoulsky, 1860

More slender; thorax with anchor-shaped impression; longer (3 mm); third joint of antenna distinctly longer than broad

T. (T.) torrentum Cameron, 1930

The following species not incorporated in the above key may be found in West Pakistan:

Ancyrophorus kashmiricus Cameron, 1941, Proc. R. ent. Soc. London (B) 10-145 (Kashmir).

Coprophilus kashmiricus Cameron, 1941, *ibid.* 145 (Kashmir).

Oxytelus (Anotylus) contiguus Cameron, 1942, *ibid.* 107 (Kashmir)

O. (A.) kashmiricus Cameron, 1942, *ibid.* 107 (Kashmir)

Platystethus cornutus var. *nigripennis* (Gridelli, 1935, Atti Mus. Stor. nat. Trieste 12:72 (Karakorum).

Trogophloeus (Boopinus) indicus Kr., 1859 Arch. Naturg. 25.

T. (B.) siamensis Fauvel, 1886, Rev.d'Ent. 5

T. (Carpalinus) coloripennis Scheerpeltz, 1963, Acta Univ. Lund (N.F.) 2(58):22 (Afghanistan).

(b) A Key to the genera and species of East Pakistan (Cameron, 1930):

1. Anterior and middle tibiae strongly spinose externally 2
 Anterior and middle tibiae ciliate, at most with two small spines before the apex 3
2. Middle coxae separated; elytra not dehiscent, the sutural angle not broadly rounded; epimera of the prothorax well developed
Oxytelus Gravenhorst, 1802 4
- Middle coxae contiguous
Planeustomus Jacq. du Val, 1859 20
3. Fourth segment of maxillary palp minute; mandibles not prominent, the apex slightly or moderately bifid
Trogophloeus Mannerheim, 1830 22
- Fourth segment of maxillary palp normaeantennae short, clavate
Delopsis Fauvel, 1895
- Larger (2 to 2.5 mm.); antennae shorter, the penultimate segments distinctly transverse
D. indicus (Bernhauer 1926)
 Cameron, 1930
4. Sides of the thorax crenulate or denticulate
O. (Oxytelus) 7
- Sides of the thorax even, at least in front 5
5. First segment of the antennae elongate, distinctly constricted before the apex 6
- First segment of the antennae not constricted before the apex *O. (Anotylus)* 8
6. Eyes with fine facets
O. (Canyraerus) 14
- Eyes with coarse facets
O. (Caccoporus) 18
7. Elytra yellow; antennae black, the first or first and second-segments more or less testaceous
O. (O.) sordidus Cameron, 1930
- Elytra black or pitchy; sides of thorax finely crenulate; length 2.75 to 3 mm.
O. (O.) cribrum Fauvel, 1905
8. Species in great part black or pitchy 9
 Species in great part red or reddish testaceous; thorax polished finely punctate sulci obsolete
O. (A.) thoracicus Motschoulsky, 1857
9. Legs more or less pitchy; opaque; elytra with reddish markings behind
O. (A.) megacephalus Fauvel, 1904
- Legs entirely testaceous 10
10. Sides of thorax distinctly bisinuate
O. (A.) birmanus Cameron, 1930.
- Sides of thorax not bisinuate 11
11. Anterior tibiae emarginate before the apex; larger (3.75 to 4 mm.) and more robust; less shining
O. (A.) sikkimi Fauvel, 1905
- Anterior tibiae not emarginate 12
12. Intraocular ridge distinct and continued back to the base of head
O. (A.) latiusculus Kraatz, 1859
- Intraocular ridge indistinct, not continued to the base 13
13. Thoracic ridges indistinct; not more shining than the rest of the surface; larger (2.75 mm.) clypeus opaque, like the rest of the surface
O. (A.) gardneri Cameron, 1930
- Thoracic ridges sharp and distinct, more shining than the rest of the surface; clypeus not more shining than the rest of the head, finely striated; vertex of head with small shining plaqued on each side
O. (A.) pygmaeus Kraatz, 1859.
14. Femora black or pitchy; large species, 4.5 to 5 mm.; thorax simply punctate; elytra scarcely striate
O. (T.) hingstoni Cameron, 1928.
- Femora testaceous 15
15. Thorax 5-sulcate 16
- Thorax 3-sulcate 17
16. Larger (5 to 5.5 mm.); head larger and sparingly punctate
O. (T.) lucens Bernhauer, 1903
- Smaller (4. mm.); head smaller and rather closely punctate
O. (T.) punctipennis Fauvel, 1930
17. Thorax deeply impressed at the sides, posterior angles obtuse
O. (T.) dohertyi Cameron, 1930
- Thorax scarcely impressed at the sides, posterior angles rounded
O. (T.) micans Kraatz, 1859

18. Subopaque species; last segment of the antennae short, conical, as long as the two preceding together; smaller, 5 mm.

O. (C.) bengalensis Erichson, 1840

Shining species 19

19. Thorax clear, reddish testaceous, the base and posterior two third of the sides narrowly black

O. (C.) nigriceps Kraatz, 1859

Thorax black or pitchy
O. (C.) varipennis Kraatz, 1859.

20. Large species ($3\frac{1}{2}$ to 5 mm.); the head and thorax without ground sculpture 21

Small species ($2\frac{1}{2}$ mm.) the head and thorax coriaceous
P. subcarinatus Champion, 1919

21. Thorax transverse; sixth segment of antennae smaller than seventh

P. bengalensis Campion, 1919

22. Thorax with a deep arcuate or horse shoe-shaped impression, open in front, at the base; antennae with the third segment about as long as the second; abdomen narrowed behind; scutellum visible
T. (Thinodromus) Kraatz

Eyes moderate; temples distinct; base of the first three abdominal segments in the middle with a little keel
T. (Thinodromus) pubicollis
Cameron, 1930

Thorax with two or four impressions on the disc, or four impressions on the disc, or without impressions 23

23. Head distinctly constricted behind the temples
T. (Trogophlaeus)

Head and thorax densely coriaceous, opaque, without puncturation; length 1 to 1.2 mm.
T. (T.) calcuttanus Bernhauer,
1911

Head scarcely constricted behind the temples
T. (Troginus) Muls. et. Rey

Black, greasy lustrous; the elytra and abdomen more shining, antennae with the first segment and often the three following testaceous; length 1.5 mm
T. (T.) exiguus Erichson, 1839

The following species not incorporated in the above may be found in East Pakistan:

Oxytelus (Anotylus) monticola
Cameron, 1942

Proc. R. ent. Soc. London (B) 11:107 (Darjeeling).

O. (A.) morbosus Cameron, 1942, *ibid.* 106 (Darjeeling). *O. (Emophotylus) cadaverinus* Cameron, 1942, *ibid.* 106 (Darjeeling).

O. (E.) falsus Cameron, 1942, *ibid.* 106 (Darjeeling)

O. (Tanycraerus) proximus Cameron, 1942, *ibid.* 105 (Darjeeling).

Platystethus longicornis Cameron, 1943, *ibid.*: 108 (Darjeeling).

C. Descriptions of new genera, subgenera and species from Karachi.

(1) *P. (Pseudo-pyctocreerus)*, new subgenus with the characteristics of the genus *Platystethus* Mannerheim, 1830.

Diagnosis.—The characteristics are given in the key (*vide supra*).

Head (without mandibles).—longer than wide; across eyes almost as broad as front margin of pronotum; constricted behind tempora to a broad neck. Vertex without any depression.

Epistomal suture distinct and clypeus with anterior margin slightly raised and emarginate. Labrum with apex emarginate, broader than base and furnished with setae.

Eyes entire, convex. Mandible long, slender, curved inner margin with two short teeth. Maxilla with lacinia broad; galea narrow.

Maxillary palp with second segment triangular, third segment subcylindrical and fourth subulate, only slightly longer than third. Gular sutures fused along middle, diverging behind and enclosing a large triangular gular plate. Submentum transverse sides parallel, anterior margin straight; base produced downwards in middle; paraglossae not distinct. Labial palp with first segment less than twice longer than broad; third narrow, about as long as second. Antenna pubescent, inserted under slightly raised margin of front in front of eye ventrally; first segment longest; second and third elongate subequal; fourth to tenth increasingly transverse; eleventh twice as long as broad, tapering at apex, nearly twice longer than tenth.

Thorax.—Pronotum (Fig. 1) nearly half as long as wide; medially sulcate throughout or at base; apex wavy. sides less rounded to more rounded. Coxae widely separated, prosternal intercoxal

process short, narrow or broad. Epipleura of pronotum well developed. Mesosternum short and broad, truncate, extending for about a third of length of mesocoxae. Metasternum long, slightly emarginate behind in front of coxae; mesosternal intercoxal process very short. Metepimeron broader than and extending not beyond metepisternum. Scutellum small, apex rounded or pointed. Metendosternite with stalk long slender. Elytron short, not or little extending beyond thorax dehiscent, apex truncate; epipleuron continued from base to apex. Legs moderate; tarsi 3,3,3, third segment less than twice longer than first two together; claws simple, curved.

Abdomen.—Last few segments normal on not telescoped; seven visible sternites, apex of eight also visible. Tergites margined on sides which are raised. In male, aedeagus with lateral lobes fused (Fig. 4).

Type of the subgenus. Platystethus (Pseudopyctocraerus) mahmoodi, sp. n.

(2) **Platystethus (Pseudopyctocraerus) mahmoodi, new species**

Brown; eyes black; last segment of maxillary palp yellow.

Head and pronotum very sparsely punctate. Elytra minutely sculptured. Pronotum wavy at apex, sides less rounded, medially sulcate at base (Fig. 1). Prosternal intercoxal process broad. Scutellum rounded at apex. Abdominal tergites with few dark and stiffer hairs.

In male, seventh abdominal sternite membranous and straight at apex, subapically weakly trilobed (Fig. 2); seventh tergite truncate and nearly straight at apex (Fig. 3); eighth sternite trilobed at apex, central lobe large; eighth tergite narrowly, deeply emarginate at apex; aedeagus (Fig. 4) narrow at apex.

Female not known

Length 2 mm.

Holotype, male, W. Pakistan, Karachi (Miss N. Qadri) February 3, 1968, from dung. The type will eventually be deposited at the University of Karachi.

The species has been named in honour of Dr. S. Hamid Mahmood of the University of Karachi.

(3) **Platystethus (Pseudopyctocraerus) tasneemae, new species**

Fuscous; eyes transparent or light yellow; antennae pubescent; last segment of maxillary palp brown; elytra light brown.

Head and pronotum finely punctate above. Elytra minutely sculptured.

Pronotum at apex wavy with three depressions, central one broader than lateral two, sides more rounded, medially sulcate throughout (Fig. 5). Scutellum pointed at apex. Prosternal intercoxal process narrow.

In male, seventh abdominal sternite weakly trilobed subapically (Fig. 6), seventh tergite truncate at apex (Fig. 7); eighth sternite trilobed at apex, central lobe small; eighth tergite narrowly, shallowly emarginate at apex; aedeagus (Fig. 8) broad at apex.

Female not known.

Length 2.3 mm.

Holotype, male, W. Pakistan, Karachi (Mrs. Tasneem Ahmed), February 6, 1968, from dung. The type will eventually be deposited at the University of Karachi.

The species has been named in honour of the collector.

(4) **Neopyctocraerus, new genus**

Diagnosis. The characteristics are given in the key (*vide supra*)

Head (without mandibles).—as long as wide; across eyes narrower than front margin of pronotum; constricted behind tempora. Tempora well developed. Frons with each antero-lateral margin slightly elevated. Epistomal suture present. Clypeus with apex as wide as base. Labrum transverse, apex emarginate and broader than base, provided with hairs. Eye entire, convex. Mandible prominent, long slender, curved, with two short subapical teeth.

Maxillary palp with first segment very small, less than half as long as second; second as long as third, lightly curved and thickened apically; third more thickened apically than base; fourth as long as third, narrow, conical. Gular sutures fused along middle, diverging behind and enclosing a moderate inverted funnel-shaped gular plate. Submentum transverse, sides parallel, apex

straight, base slightly produced downwards in middle; mentum transverse, apex broadly emarginate. Paraglossae absent. Labial palp with first segment subcylindrical, longer than broad; second narrower and almost as long as first; third narrower and nearly as long as second. Antenna pubescent inserted under a raised margin of front in front of eyes; first segment longest; second and third elongate, subequal; fourth to tenth increasingly transverse eleventh longer than broad, apically tapering, nearly twice longer than tenth.

Thorax.—Pronotum (Fig. 9) nearly half as long as wide; medially sulcate at base, apex wavy with three subequal emarginations; sides toothed emarginate near base; base nearly half in breadth of apex. Coxae separate. Prosternum short, transverse; prosternal tubercle absent, intercoxal process short, Metasternum short, broad. Metasternum long, slightly emarginate behind in front of meta coxae, intercoxal process short and broad. Metepimeron narrow. Scutellum wider than long, entire at apex. Elytron short, not extending beyond thorax, dehiscent behind, apex straight epipleuron continued from base to apex. Legs moderate; front coxae shorter than femora; front and middle tibiae spinose externally; hind tibiae with small spines; tarsi 3,3,3, first and second segments short, third much longer than first two combined; claws simple, lightly curved.

Abdomen.—Last few segments telescoped; six visible sternites, seventh and apex of eighth visible. Tergites margined on sides which are raised. In male, aedeagus characteristic, broad and truncate at apex. (Fig. 13).

Type of the genus. Neopyctocraerus shafqati sp. n.

(5) **Neopyctocraerus shafqati**, new species

Dark brown; eyes black; head and abdominal segments four to eight infuscate; elytra and legs testaceous.

Head finely sculptured. Pronotum with coarse punctures. Elytra slightly punctate.

In male, seventh abdominal sternite with apex trilobed (Fig. 10); seventh tergite with apex truncate and slightly laterally produced (Fig. 11) eighth sternite bilobed deeply emarginate at apex (Fig. 12); eighth tergite tapering at apex (Fig. 12).

Female not known.

Length 3 mm

Holotype male, W. Pakistan, Karachi (Miss Batool A. Khan) January 15, 1968, from dung.

The type will eventually be deposited at the University of Karachi.

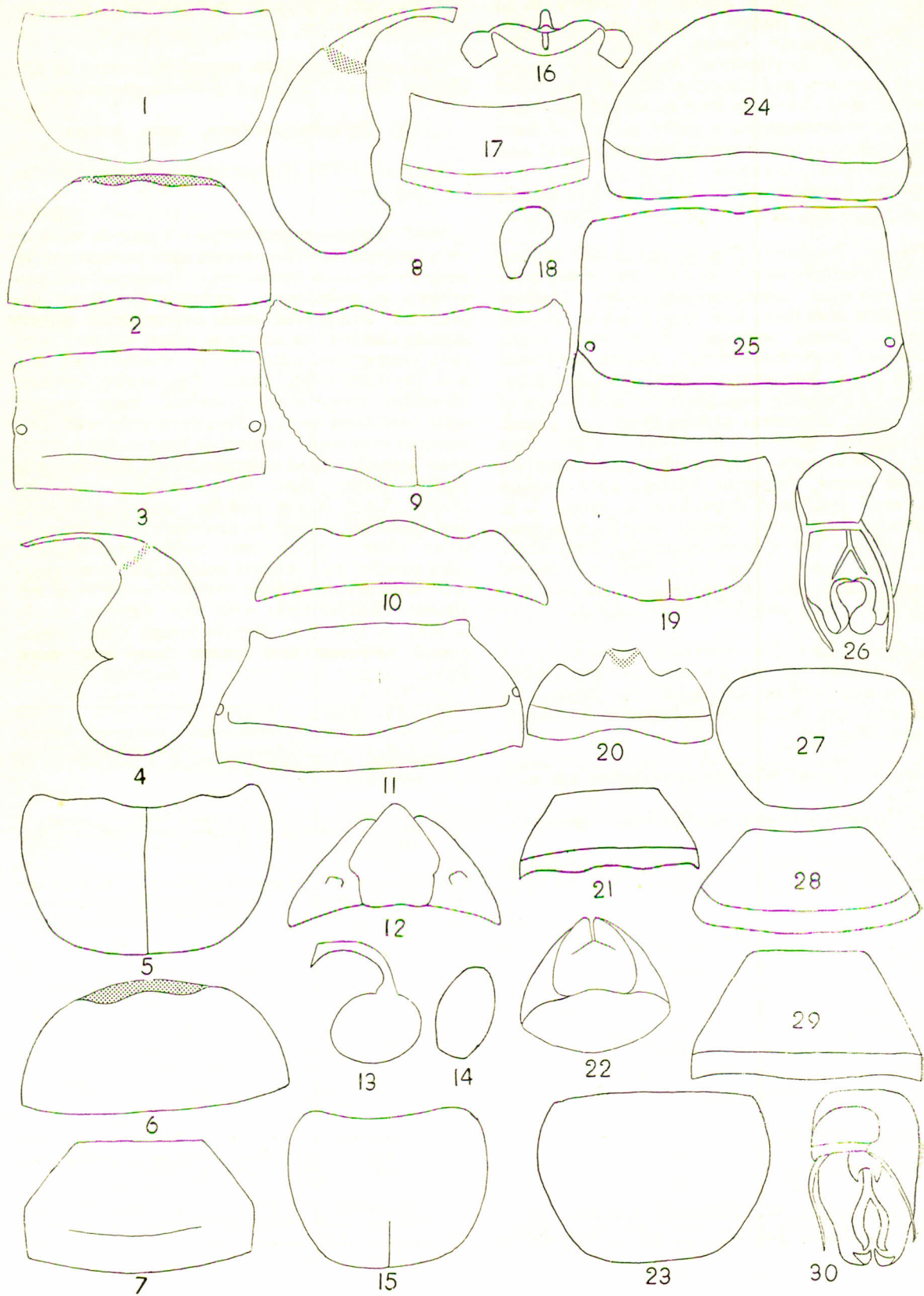
The species has been named in honour of Dr. Shafqat Hussain Siddiqui of this organization.

(6) **Neoplatystethus**, new genus

Diagnosis.—The characteristics are given in the key (*vide supra*).

Head (without mandibles).—as long as wide or little longer than wide; across eyes narrower or as wide as apex of pronotum. Tempora well developed to quite long. Vertex without any depression. Frons with each anterolateral margin slightly elevated as antennal ridge. Clypeus with apex emarginate, narrower or broader than base and provided with hairs. Eye entire, convex. Mandible long, slender, curved, inner margin with two short teeth. Maxillary palp with first segment very small; second as long as third thickened apically third subcylindrical; fourth only slightly longer than third, subulate. Gular sutures fused along middle, diverging behind and enclosing a large to moderate size triangular gular plate. Submentum with apex straight, sides parallel and pointed behind. Mentum transverse with apex and base straight; paraglossae not distinct. Labial palp with first segment nearly as long as broad or slightly longer than broad; second narrower and longer than first; third slightly longer than second. Antenna inserted

- (1—2) *Platystethus* (*Pseudopyctocraerus*) *mahmoodi* Subgen. et sp. nov., 1, pronotum; 2, seventh abdominal sternite of male; 3, seventh tergite of male; 4, aedeagus, lateral view.
- (3) *Platystethus* (*Pseudopyctocraerus*) *tasneemae* Subgen. et sp. nov., 5, pronotum; 6, seventh abdominal sternite of male; 7, seventh tergite of male; 8, aedeagus, lateral view.
- (4—5) *Neopyctocraerus shafqati*. Gen. et sp. nov., 9, pronotum; 10, seventh sternite of male; 11, seventh tergite of male; 12, eighth sternite and tergite dorsal view; 13, aedeagus, ventral view.
- (6—8) *Neoplatystethus* (*Neoplatystethus*) *hameedi* Gen., et sp. nov., 14, third segment of maxillary palp; 15, pronotum; 16, seventh sternite; 17, seventh tergite;
- (9—10) *Neoplatystethus* (*Pseudoplatystethus*) *meccii* Gen. subgen. et sp. nov., 18, third segment of maxillary palp; 19, pronotum; 20, seventh sternite of male; 21, seventh sternite of male; 21, seventh tergite of male; 22, eighth sternite and tergite dorsal view.
- (11) *Trogophloeus zahiri* sp. nov., 23, pronotum; 24, seventh sternite of male; 25, seventh tergite of male; 26, aedeagus, slightly ventro-lateral view.
- (12) *Trogophloeus qadrii* sp. nov., 27, pronotum; 28, seventh sternite of male; 29, seventh tergite of male; 30 aedeagus, slightly ventro-lateral view.



under a thickened marginal border in front of eyes ventrally; first segment longest; second slightly less than half of first; third to tenth increasingly transverse; eleventh twice as long as broad, tapering at apex nearly twice longer than tenth.

Thorax.—Pronotum (Figs. 15 and 19) wider than long; medially sulcate at base; apex broadly weakly wavy emarginate, sides rounded at and near base; base slightly more than half in breadth than apex. Coxae widely separated. Prosternum short, prosternal tubercle absent, intercoxal process truncate to weakly emarginate at apex. Epimeron absent. Mesosternum short. Metasternum long. Metepimeron broader than metepisternum. Scutellum small, almost as long as wide, pointed or rounded at apex.

Metendosternite with stalk long, slender. Elytron little extending beyond thorax, apex truncate; epipleuron continued from base to apex. Hindwing with a well developed pterostigma; legs moderate front coxae shorter than femora; pro and mesotibiae spinose metatibiae less spinose; tarsi 3,3,3, first and second segments short, third much longer than first two together; claws simple, long, curved.

Abdomen.—Last few abdominal segments telescoped; six visible sternites, seventh telescoped, apex of eighth also visible, latter furnished with spines of dark colour.

Type of the genus. Neoplatystethus (Neoplatystethus) hameedi, sp. n.

(7) *N. (Neoplatystethus), new subgenus*

With the characteristics of the genus *Neoplatystethus* Abdullah and Qadri.

Diagnosis.—The characteristics are given in the key (*vide supra*).

Head (without mandibles).—as long as wide; across eyes as wide as apex of pronotum. Tempora distinct. Epistomal suture distinct. Clypeus with apex slightly raised; narrower than base. Labrum transverse, slanting downwards, apex broader than base, deeply emarginate, provided with hair. Third segment of maxillary palp (Fig. 14) less narrower at base than in *N. (Pseudoplatystethus)* (Fig. 18). Gular plate large, triangular.

Thorax.—Pronotum (Fig. 15) with apex weakly, broadly emarginate. Scutellum small. Prosternal intercoxal process truncate at apex.

Type of the subgenus. Neoplatystethus (Neoplatystethus) hameedi sp. n.

(8) *Neoplatystethus (Neoplatystethus) hameedi, new species*

Head and abdomen fuscous; eyes black; pronotum and elytra brown.

Head, pronotum and elytra coarsely sculptured. Abdominal sternites with dark and stiff hairs.

In male seventh abdominal sternite transverse, with a long, narrow median process at apex (Fig. 16); seventh tergite with apex broadly weakly emarginate (Fig. 17); eighth sternite bilobed, deeply emarginate at apex; eighth tergite slightly truncate at apex at apex; eighth tergite slightly truncate at apex at

Female not known

Length 1.2 mm.

Holotype, male, W. Pakistan, Karachi (Miss N. Qadri) January, 8, 1968, from dung. The type will eventually be deposited at the University of Karachi.

The species has been named in honour of Dr. Abdul Hameed Khan of this institution.

(9) *N. (Pseudoplatystethus), new subgenus*

With the characteristics of the genus *Neoplatystethus* Abdullah and Qadri.

Diagnosis.—The characteristics are given in the key (*vide supra*).

Head.—Nearly twice longer than pronotum. Tempora long. Epistomal suture not visible. Labrum transverse; apex narrower than base, emarginate; sides rounded, provided with hairs. Third segment of maxillary palp (Fig. 18) more narrower at base than in *N. (Neoplatystethus)* (Fig. 14). Gular plate small, triangular.

Thorax.—Pronotum (Fig. 19) with apex wavy, central emargination deeper than lateral emargination. Scutellum moderate. Prosternal intercoxal process weakly emarginate at apex.

Type of the subgenus. Neoplatystethus (Pseudoplatystethus) meccii sp. n.

(10) *Neoplatystethus (Pseudoplatystethus) meccii, new species*

Head and abdomen fuscous; eyes black; pronotum and elytra brown.

Head, pronotum and elytra coarsely sculptured. Abdominal sternites with dark and stiff hairs.

In male, seventh abdominal sternite trilobed at apex central lobe long and slightly emarginate (Fig. 20) seventh tergite truncate to slightly emarginate at apex (Fig. 21); eight sternite bilobed, deeply emarginate at apex (Fig. 22); aedeagus with lateral lobes separated apically.

Female not known

Length 2 mm.

Holotype. male, W. Pakistan, Karachi (Miss N. Qadri) January 8, 1968, from dung. The type will eventually be deposited at the University of Karachi.

The species has been named in honour of Mr. A.K. Mecci of the Agriculture College, Tandojam.

(11) *Trogophloeus zahiri*, new species

Brown; eyes transparent; head and abdomen dark brown.

Head and pronotum finely punctate above. pronotum with apex straight, base slightly more than half as wide as apex; sides rounded (Fig. 23). Elytra with very fine punctures. Abdomen elongated last two (*i.e.* seventh and eighth) segments hairy.

In male, seventh abdominal sternite with apex entire (Fig. 24); seventh tergite broadly weakly emarginate at apex (Fig. 25); aedeagus with lateral lobes long (*i.e.* extending much beyond median lobe) (Fig. 26).

Female not known.

Length 2.7 mm.

Holotype.—Male, W. Pakistan, Karachi (Miss N. Qadri) *Paratypes*.—two, males, with the above data. The types will eventually be deposited at the University of Karachi.

The species has been named in honour of Dr. Zaheer Ahmed of this institution.

(12) *Trogophloeus qadrii*, new species

Brown; eyes black; head and abdomen dark brown.

Head and pronotum very finely punctate. Latter nearly straight at apex with sides rounded (Fig. 27).

Elytra very finely sculptured. Abdomen sparsely pubescent.

In male seventh abdominal sternite with apex (Fig. 29); aedeagus with lateral lobes short (*i.e.*, not extending beyond median lobe) (Fig. 30).

Female now known.

Length 2 mm.

Holotype, male, W. Pakistan, Karachi (Miss N. Qadri) from dung. The type will eventually be deposited at the University of Karachi.

The species has been named in honour of Prof. Mohammad Afzal Hussain Qadri of the University of Karachi.

(d) General discussion—why not Proteininae?

Erichson (1839:641) distinguished the tribe proteinini as a division of the sub-family Oxytelinae. Others elevated the tribe to the rank of a sub-family. Later on, Paulian (1941:54) stated that the elevation of the tribe to the rank of a subfamily (Proteininae) could not be justified since the larvae of the Oxytelini and Proteinini showed intermediate characters related to each other, thus making a clear distinction difficult for practical purposes. This is, however, not the case (*vide infra*). In recent years, some authors such as Tottenham (1964:13) and Lohse (1964:21) have further separated the genus *Metopsia* Wollaston from the remainder of the Proteininae to form the subfamily Metopsiinae. There is however, no justification for this action, since both the larvae and adults of *Metopsia* are essentially proteinine. Steel (1966) and Kasule (1966) have distinguished the Proteininae (Proteinini) and Oxytelinae and treated them as subfamilies. This is also the view of the present writers.

The characteristics of our described material of the tribe Oxytelini (Oxytelinae) have already been given (*vide supra*). The noteworthy resemblance to the Proteininae is in the number of tarsal segments which is 3-3-3 (*vide table 1*).

As has been mentioned above, the tarsal formula 3-3-3 is found in the Oxytelinae and Proteininae but owing to the following characters present in the Proteininae (*vide Steel, 1966:290*) and not found in our material, we have decided to place them in the subfamily Oxytelinae; head sometimes with a single ocellus, occipital suture separate, mandibles short and stout, apical segments of antennae sometimes forming a more or less distinct club, antennal insertions completely hidden

TABLE I.—TARSAL FORMULAE OF THE SUBFAMILIES OF THE STAPHYLINDIAE STUDIED BY THE AUTHORS.

Subfamilies	Tarsal formulae
I. Steninae	5-5-5
II. Euaesthetinae	4-4-4 & 4-4-5
III. Oxyporinae	5-5-5
IV. Piestinae	5-5-5
V. Osoriinae	5-5-5
VI. Pseudopsinae	5-5-5
VII. Oxytelinae	5-5-5, 3-3-3 & 2-2-2
VIII. Omalinae	5-5-5
IX. Proteininae	5-5-5, 4-4-4 & 3-3-3
X. Tachyporinae	5-5-5 & 4-4-4
XI. Paederinae	5-5-5
XII. Staphylininae	5-5-5, 4-4-5 & 5-4-4

under raised margin of front; pronotum transverse, anterior coxal cavities practically always partially closed behind by a pair of separate more or less triangular and post coxal sternite and epipleura with a distinct keel; abdomen with median longitudinal keel ventrally present; anterior margin of sternite of eighth segment modified.

The above mentioned characters are not found in the members of the Oxytelinae as defined by recent workers including ourselves. Furthermore, the second morphological abdominal sternite is visible in the new taxa described in this paper—

thus making the number of visible abdominal sternites to seven. This character (of the Oxytelinae) alone is sufficient to distinguish this subfamily from not only the Proteininae but all other remaining subfamilies of the Staphylinidae.

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