Türk. Bit. Kor. Derg. (1978), 2 (3) : 125 - 142

Notes on the Miridae (Heteroptera) from India and Pakistan

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Özet

Hindistan ve Pakistan'ın bazı Miridae (Heteroptera) türleri üzerinde notlar

Bu makalede Pakistan'dan Miridae (Heteroptera) familyasına bağlı ***Montanorthops*** ve ***Onderothops*** isimli 2 yeni cins ile ***Onderothops feyzii*** ve ***Macrotylus suhaili*** isimli 2 türün orijinal deskripsiyonları verilmiştir ***Camptobrochis qualis*** Distant, ***Montanorthops*** cinsinin type - species'i olarak seçilmiş ve bu Deraeocorinae alt familyasından Mirinae'ye aktarılmıştır. Diğer 3 tür, ***Orthops foreli*** Fieber, ***Orthops sanguinolentus*** Reuter ve ***Orthops montanus*** (Schilling) de ***Montanorthops*** cinsine sokulmuştur. Ayrıca ***Montanorthops*** cinsinin ***Orthops, Camptozygum*** ve ***Deraeocoris*** cinsleriyle kıyaslaması yapılmıştır. Ele alınan türlerin deskripsiyonları yeniden yapılarak bunları birbirinden ayırmak için bir anahtar verilmiştir. ***Onderothops*** cinsi de ***Orthops, Neolygus Lygus, Apolygus*** ve ***Poecilocapsus*** cinsleri ile kıyaslanmıştır. Yeni bir tür olan ***Macrotylus suhaili***'nin erkek eşey organının ilginç bir görünüşe sahip olması bu türün ***Macrotylus*** cinsinin herhangi bir alt cinsine bağlanmasını önlemektedir.

Introduction

The following notes on the Miridae of Pakistan and northern India are based on the collections received for identification from the Commonwealth Institute of Biological Control, Rawalpindi, Pakistan.

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Alınış (Received) 25.4 1978

As the C.I.B.C. is conducting a survey of the mirid fauna of northern hills in connection with their projects on the biological control of the pests of temperate zones, it is apparent that the identity of the species should be established as accurately as possible. It is with this objective that the following notes are prepared. Incidently, it should be noted here that the pubescence of the body surface of the Miridae provides quite often an important character for the determination of genera of this family. The specimens should therefore be very carefully handled while pinning and setting since the hairs and the setae are liable to be easily rubbed off leading to inaccurate determination.

The paper deals, first, with the species ***Camptobrochis qualis*** Distant (1910), described from Simla, India, correcting its position and proving its true familial and generic affinities, with the help of original illustrations and redescription. In this connection a new genus, ***Montanorthops*** is described based on the ***montanus*** group of the genus ***Orthops*** Fieber. Next, a new genus ***Onderothops*** based on a new species ***Onderothops feyzii*** is described from specimens colllected in Jhika Gali, Murree, Pakistan. The economic importance of this species is only known to its senders (in addition to, of course, its Creator) who seem to be reluctant to divulge it to the writer, inspite of the repeated requests, but a name for this taxon is probably badly needed by them as is evident by their furtive efforts of gaining this knowledge either from the British Museum (Natural History), London or the U.S. National Museum, Washington, U.S.A. And finally, a new species, ***Macrotylus suhaili*** is described from Rawalpindi, Pakistan. This genus though widely distributed, from North America in the West to Turkey, Syria and Iran in the East, is recorded for the first time from Pakistan.

Montanorthops gen. nov.

Distant (1910) described ***Camptobrochis qualis*** from the Simla Hills, Theog, 8,000 ft (India). This description was apparently based on a female whose tarsi were missing and a second specimen which now is not traceable. The genera ***Camptobrochis*** and ***Deraeocoris*** were placed by Distant (1904) in the Division Capsaria which was to become, later, part of the subfamily Mirinae. According to him (1904) the present family Miridae (Capsidae) was divided into two subfamilies:- Mirinae and Capsinae, and the character he used was the presence or absence of the sulcus on the head, and not the claw-structure which forms the basis of present division of the family Miridae. However, with the synonymisation of ***Camptobrochis*** in favour of ***Deraeocoris*** by Poppius (1912), ***Camptobrochis qualis*** Distant became ***Deraeocoris qualis*** (Distant), and

remained ever since in the subfamily Deraeocorinae. The broken claw (and tarsi) of the type specimen of ***C. qualis*** Distant, which could have provided a clue to the true subfamilial affinity of this species had they remained intact, misled the subsequent specialists on Miridae. They saw the outer appearance of ***C. qualis*** with deep punctures on the pronotum, hemelytra and scutellum which very closely resemle those of ***Deraeocoris punctulatus*** (Fallen), the type species of ***Camptobrochis*** and ***Deraeocoris olivaceus*** (Fabricius), the type species of ***Deraeocoris.*** The fundamental claw-character which separate the subfamilies of Miridae was missing from the very beginning in the (?single) specimen available of ***C. qualis.*** Thanks to the C.I.B.C., Rawalpindi, three specimens (2♀1♂) of ***C. qualis*** sent for identification, became available to to the writer through the courtsey of Dr. M. A. Ghani, Entomologist-in-Charge of the C.I.B.C. Station in Pakistan. These specimens were collected in the hills of Swat (Gali Bagh) and proved conspecific with ***C. qualis.*** From their claw-structures, it became evident that ***C. qualis*** belongs to the subfamily Mirinae rather than to the subfamily Deraeocorinae.

Description

Colour : golden yellow with reddish splashes and black markings. Spines on tibia yellow.

Structure : pronotum, scutellum and hemelytra deeply and thickly punctate, calli close together, vertex with few punctures, posterior margin with a transverse prominent carina, space between lower margin of eye and bucculae only slightly more than maximum width of latter, antennal socket located near middle of anterior margin of eye, second antennal segment short, ratio length of second segment : maximum width of pronotum 6 : 11 ; pronotal collar with suppressed and sparse hairs; aedeagus with spicule; posterior wall of bursa copulatrix lacks B structure but has E and C structures.

Type species, ***Montanorthops qualis*** (Distant) ***comb. nov.***

Comments : The new genus is based on the ***montanus*** group of species of the genus ***Orthops sensu lato, M. montanus*** (Schilling), ***comb. nov., M. sanguinolentus*** (Reuter), ***comb. nov., M. foreli*** (Fieber), ***comb. nov.*** including now formally transferred ***M. qualis*** (Distant). Stys (1970) already recognised ***montanus*** group in the genus ***Orthops,*** based on the two species ***M. montanus*** and ***M. foreli.*** The new genus differs from ***Orthops sensu strict.*** in its deep punctures (shallow punctures in typical ***Orthops***), suppressed hairs on its pronotal collar (in typical ***Orthops*** collar hair much longer than width of collar) and yellow spines on

tibiae (dark in ***Orthops***). The above mentioned four species of the new genus occur in the hills and resemble one another quite closely. ***Montanorthops*** superficially looks like the genus ***Camptozygum,*** but the space between the lower margin of eye and the bucculae is at least twice width of bucculae in ***Camptozygum*** whereas in the new genus it is less than one and a half times; incidently, it also differs from ***Deraeocoris,*** apart from the fundamental subfamily claw-character, by the same token.

Montanorthops qualis (Distant) *comb. nov.*

Colour : Ochraceous. with vertex, 1st and 2nd antennal segments, calli, posterior margin of pronotum, base of scutellum, clavus, a wide band across hemelytra just before cuneus, apical half of cuneus, thoraxic sterna and abdominal sternites, wide apical ill defined band on femora, all with sanguineous suffusion; eyes, 3rd and 4th antennal segments and tarsi dark brown to black; carina on vertex and pronotal collar white; punctures reddish.

Measurements (mm) of ♂(♀): Width of head across eyes 0.94 (0.95-0.99), width of an eye 0.29 (0.27-0.30), width of vertex between eyes 0.36 (0.39-040), length of antennal segments 1st, 2nd, 3rd and 4th, respectively, 0.29 (0.26-0.29), 1.00 (0.87-0.92), 0.55 (0.55) and 0.40 (0.36-0.40); maximum width of pronotum 1.50 (1.56-1.60); body length 4.00 (4.50).

Structure : First antennal segment much shorter than width of vertex between eyes, length of second antennal segment less than twice length of third antennal segment and subequal to combined lengths of third and fourth segments, length of second antennal segment only a little more than half maximum width of pronotum; spicule of aedeagus long and abruptly narrowed towards apex which is thickened and bent appreciably, right paramere-head with a short neck, head of left paramere, in full view, claw-shaped; bursa copulatrix, dorsal wall with F structure having sclerotised rings below which are located G structures which posses equally large elongate component well sclerotised and folded mesad, similarly F structures' massive companions turning towards middle line, as shown in fig. 18, C structure is semisclerotised, E structure well sclerotised, A structure mostly membranous, laterally highly sclerotised; B structure absent.

Material examined : ♀ holotype of ***Camptobrochis qualis*** Distant, India, Simla Hills, Theog alt. 8,000 ft, 13.v.1909 ***(Annandale);*** this single ♀ with two red margined labels and with the above mentioned data is

designated here as lectotype. Distant (1910) mentioned a second specimen in his description of the species, but it is not traceable now. Pakistan: Swat, Gali Bagh, 18. viii. 1976 (***C.I.B.C., Rawalpindi***) on ***R. hastatus,*** 1♂2♀. All in the British Museum (Natural History), London.

Comments : ***M. qualis*** is the smallest species of this genus and without black spots on the sterna. It is nearest to ***M. foreli*** which has longer first and second antennal segments. The aedeagal spicule of ***M. qualis,*** contrary to its body size, much longer than that of ***M. foreli*** (***cf.*** fig. 17 & fig. 25). ***M. qualis*** is the eastern most species of its genus.

Montanorthops foreli (Fieber) *comb. nov.*

Colour : Ochraceous, with vertex, tylus, base and apex of 2nd antennal segment, 3rd and 4th segments, calli, extensive areas on sterna and abdominal sternites, and tips of tarsi black, in some specimens clavus and trasverse band just before cuneus red, femora with black or red suffusion, in most specimens scutellum without red or black markings; vertex - carina and pronotal collar yellowish white; punctures dark brown to black.

Measurements (mm) of ♂ (♀) : Width of head across eyes 0.97 - 0.98 (0.97 - 1.00), width of an eye 0.30 - 0.32 (0.29. - 0.30), width of vertex between eyes 0.34 - 0.37 (0.40 - 0.46), length of antennal segments 1st, 2nd, 3rd, and 4th, respectively, 0.34 (0.32 - 0.35), 1.00 - 1.16 (0.97 - 1.00), 0.50 - 0.53 (0.49 - 0.50) & 0.37 - 0.40 (0.34 - 0.40); maximum width of pronotum 1.57 - 1.72 (1.71 - 1.87); body length 4.50 - 5.0 (4.50 - 5.25).

Structure : First antennal segment shorter than width of vertex between eyes, length of second antennal segment twice length of third segment and more than combined lengths of third and fourth segments, length of second segment more than half maximum width of pronotum; spicule of aedeagus short and thick with apex slightly swollen and obscured teeth, right paramere-head moderately long and broad, head of left paramere, in full view, claw shaped; bursa copulatrix, shape of various structures specifically different from those of ***M. qualis, cf.*** figs. 18 and 19 with figs. 27 and 28.

Material examined : Czechoslovakia, Jesnikg srák, 16.vii.1947, (***J. Stehlik***) 1 - 3201340 m, 1♂, det. J. Stehlik as ***LYGUS (ORTHOPS) FORELI*** Fieber; Oetscher, Austr/inf, (***Dr. Eger.***), 89-51, 1♀; det. as ***LYGUS FORELI*** Mey. Spain, Sierra de Guadarrama, viii. 1926, (***B. Uvarov***), 1♂ 3♀.

Switzerland. M.D., 1910 ***(Saunders coll.)***, 2♀. In B.M. (N.H.), London. I have not seen the type.

Comments : From ***M. qualis*** to which it closely resemble, ***M. foreli*** differs by its black sterna and sternites, longer first and second antennal segments, slightly longer head of right paramere and much shorter spicule. This species is considered at present to have a distribution as far east as Iran and Turkestan which are very close to Swat (Pakistan) and Simla (India) where ***M. qualis*** occurs. I have not seen specimens of ***M. foreli***, from Asia (Turkestan etc.), but it will be interesting to compare material of ***M. foreli*** from these localities with ***M. qualis***.

Montanorthops sanguinolentus (Reuter)

Colour : Ochraceous, with vertex reddish, calli outlined with brown, posterior margin of pronotum, clavus and apical band of hemelytra reddish, 1st and 2nd antennal segments without trace of dark colour, 3rd and 4th segments faintly smoky, femora suffused with red, sterna and sternites black, eyes red, punctures brown, vertex - carina and pronotal collar yellowish white.

Measurements (mm) of ♂ : Width of head across eyes 1.00, width of an eye 0.30, width of vertex between eyes 0.40, length of antennal segments 1st, 2nd, 3rd and 4th, respectively, 0.40, 1.11, 0.60 and 0.40; maximum width of pronotum 1.73; body length 5.50.

Structure : First antennal segment as long as width of vertex, second segment more than twice length of third segment but less than combined lengths of third and fourth segments, distinctly longer than half width of pronotum; spicule of aedeagus short and very thick, very gradually narrowed towards apex, right paramere - head almost without 'neck', head of left paramere, in full view, straight. Female not available for study.

Material examined : USSR, Syr - Darya Region, 9. vi. 1910, ***(A. Kirichenko)***, 1♂, det. by Kirichenko as ***Lygus sanguinolentus*** Reuter, Brit. Mus. 1926 - 171.

Comments : ***M. sanguinolentus*** resembles both ***M. qualis*** and ***M. foreli***, but has a longer first antennal segment than either from ***M. qualis*** it also differs in the black ventral surface of the thorax and the abdomen and from ***M. foreli*** in the absence of black rings at the base

and the apex of second antennal segment. The straight apex of left paramere and the thick spicule are also characteristics of this species. Wagner (1954) who studied the type material and designated a lectotype found three females in Reuter's collection, therefore inspite of a reference in Carvalho's catalogue (1959), the male genitalia of this species, based on the type material could never be known. In the same catalogue there are some printing errors which are now ammended, ***vide*** list of references in this paper.

Montanorthops montanus (Schilling) ***comb. nov.***

Colour : Ochraceous with reddish suffusion and black markings, head, dark brown, vertex - carina pale yellow, a reddish streak running along with internal margin of dark brown eyes continuous with reddish juga, antennal segments one and two dark reddish with extensive black suffusion, three and four black; pronotum, collar pale yellow, calli black or dark reddish with black margin, disk with red suffusion, posterior margin broadly red; scutellum, disc black or red; hemelytra, clavus, transverse fascia at apex and apex of cuneus red; ventre extensively black; femora reddish, last segment of tarsi dark brown; punctures black.

Measurements (mm) of ♂(♀) : Width of head across eyes 0.97-1.04 (1.02), width of an eye 0.29-0.32(0.31), width of vertex between eyes 0.39-0.40(0.40), length of antennal ssgmens 1st, 2nd, 3rd and 4th, respectively, 0.49(0.48), 1.33-1.45(1.20), 0.74-0.80(0.70)& 0.49-0.56(0.49); maximum width of pronotum 1.70-1.80 (1.98); body length 5.50(5.50).

Structure : First antennal segment distinctly longer than width of vertex between eyes, second antennal segment less than twice length of third segment and more than combined lengths of third and fourth segments, length of second segment much more than half maximum width of pronotum; spicule of aedeagus long and thin, apex sligthly bent, head of right paramere with long "neck", head of left paramere, in full view, claw shaped; bursa copulatrix, shape of various structures specifically different from those of ***M. qualis, cf.*** figs. 18, 19, 27 and 28 with figs. 40 and 41.

Material examined : France, Haute Savoie, Trelechant, (***G. C. C.***), (Champion Coll. B.M. 1927-904) 1♂, det. as ***Lygus montanus*** Schill.; Germany, Breitenb., vii. 1889, (***Boh.***), (Saunders Coll. 1910-357), 1♂1♀.

Comments : This is the largest of the species of ***Montanorthops*** as well as the darkest with the longest first and second antennal seg-

ments, the first segment being longer than the width of vertex distinguishes ***M. montanus*** from the other three species, ***M. qualis***, ***M. foreli*** and ***M. sanguinolentus***; the darker first and second antennal segments of this species also differ from those of the others.

Key to the species of the genus ***Montanorthops***

1. Sterna with extensive black patches 2

   Sterna without black patches ..... ***M. qualis*** (Distant)

2. 1st antennal segment longer than or equal to width of vertex between eyes; 2nd segment less than twice length of 3rd segment 3

   1st antennal segment shorter than width of vertex between eyes; 2nd segment twice length of 3rd segment (5.00 : 2.50) ..... ***M. foreli*** (Fieber)

3. 1st antennal segment longer than width of vertex between eyes (2.40 : 2.00) and with dark patches ..... ***M. montanus*** (Schilling)

   1st antennal segment equal to width of vertex between eyes (2.00 : 2.00) and without dark patches ..... ***M. sanguinolentus*** (Reuter)

Onderothops gen. nov.

Colour: Body yellow with light green, red and black markings, hairs of body surface golden, setae on tibiae golden; black hairs or black setae absent.

Structure: Surface of head smooth, of pronotum shallowly punctate and shallowly rugose, of scutellum finely rugose, of hemelytra smooth, only one kind of hairs on each surface, semi-errect, straight or curved but neither wooly nor stiff, tibial spines not longer than width of tibiae; vertex smooth, without any trace of a basal carina or longitudinal sulcus; eyes granulate: bucculae as wide as space between it and lower margin of eye, tylus prominent, lorum swollen, jugum convex; antennal fossa located close to anterior margin of eye, in side view just

below middle height of eye; 1st antennal segment almost as long as width of head across eyes, 2nd antennal segment as long as combined lengths of pronotum and scutellum, longer than total lengths of head, pronotum and scutellum, thinner than 1st antennal segment, becoming slightly thicker towards its apex than base, 3rd and 4th segments much finer, 3rd longer than head width; rostrum reaching mesocoxae, basal segment much thicker than other much finer segments; pronotum without lateral marginal carina, width at anterior margin equal to twice width at posterior margin, collar wide, width as much as thickness of 1st antennal segment, with prominent setae, calli meeting in middle and extending to lateral margins; scutellum without special hairs; hemelytra long, extending much beyond abdomen, cuneus longer than wider at base; femora not flattened, hind femora not very long, 1st segment of hind tarsus shorter than 2nd, 3rd only slightly longer than 2nd. Male genitalia, pygophore without spur or any other projection, left and right parameres similar to those of ***Liocoris***, left paramere curved with basal lobe well developed, serrate, apex of paramere not truncate but as shown in fig. 50; right paramere with apical process claw shaped, vesica with five lobes, two of them with series of prominent spines, one with large, well sclerotised lobe-sclerite, spicule unbranched, well developed, sinuate, seminal duct wide at apex, then sharply constricted followed by wide but not uniformly so, tube, fig. 53. Female genitalia, sclerotised rings of F structure narrow, ellyptical, flanked posteriorly by elongate companion sclerites, G structures below rings in form of short triangles with ring-like components folded mesad, A and B structures present, posterior wall as shown in fig. 57 and 58.

Type species, ***Onderothops feyzii gen. et sp. nov.***

Comments. In Kelton's key (1955) to genera and subgenera of ***Lygus*** complex, the new genus runs to ***Orthops*** from which it differs in its punctato-rugose surface (in typical ***Orthops*** only shallowly punctate); vesica of the new genus has a lobe-sclerite in addition to spicule (in ***Orthops*** only spicule but no lobe-sclerite), surface of hemelytra is smooth in ***Onderothops*** (shallowly punctate in typical ***Orthops***). Male parameres and female genitalia are also different in these genera. The new genus can also be easily differentiated from ***Orthops*** by its smooth vertex (in ***Orthops*** vertex is carinate). In the presence of lobe-sclerite, the new genus resembles ***Neolygus*** from which it differs in the absence of lobe on left paramere. In Stichel's key (1956) to European genera, it runs to ***Lygocoris*** (equated to ***Lygus*** Hahn by Kelton, 1955), but differs in the shape of female rings and by the presence of lobe-sclerite. Externally, ***Onderothops*** is readily differentiated from ***L. pabulinus*** by its dull

body surface (shining in *L. pabulinus*) and by its smooth vertex (carinate at least laterally in *L. pabulinus*. From *Apolygus* China (type *A. limbatus* (Fallen)) the new genus differs in its smooth vertex (in *A. limbatus* vertex carinate), wide collar (narrow in *A. limbatus*), golden tibial spines (black in *A. limbatus*), semi-errect hairs (adpressed pubescence in *A. limbatus*) and rugose surface of pronotum (smooth and shining in *A. limbatus*). Badly handled specimens of this genus, which have lost their pubescence becoming artificially glabrous, may lead one to *Poecilocapsus* in Carvalho's key (1955), to which the new genus resembles in non-carinate vertex, short rostrum, shape of left and right parameres and general colour of the body.

Onderothops feyzii sp.n.

Colour : Head golden yellow with light red suffusion, eyes dark, jugum with a black triangular spot adjacent to tylus, pronotum yellow, calli with laterally located black spot, a pair of longitudinal black spots on disc and hind margin, with a median interruption, widely black, scutellum, lateral margin with a longitudinal black fascia, clavus dark with red suffusion, corium near internal margin with fascia in continuation with dark clavus, membrane black, veins reddish; 1st and 2nd antennal segments yellow, apical third of 2nd, 3rd and 4th segments dark, legs smoky yellow, apical half of hind tibia more so, last segment of tarsi and claw dark; ventral surface of body dirty greenish yellow; females much less colourful loosing black spots in some specimens, than males.

Measurements (mm) ♂(♀) : Width of head across eyes 0.95 (0.99), length of vertex 0.40(0.40), width of vertex between eyes 0.37(0.43), width of eye 0.29(0.28), length of antennal segments 1st, 2nd, 3rd and 4th, respectively, 0.67(0.67), 2.00(1.86), 1.30(1.32) and 0.67(—); maximum width of pronotum 1.56(1.77); total body length 5.40(6.00).

Structure : Body elongate, width of vertex less than twice width of an eye, ratio width of vertex to width of eye in ♂, 1.84: 1.45 and in ♀ 2.15: 1.40; apex of left paramere, in full view, not claw shaped; spicule of aedeagus curved, base thick, gradually narrowed to a point at apex, middle area with visible teeth, lobe-sclerite heavily sclerotised, with a broad base, drawn out into a narrowed apex, tip of which bears distinct teeth; other parts as described in generic description.

Material studied : Holotype ♂(1456), Pakistan, Murree, Jhika Gali, 4.vi.1973 (*C.I.B.C., Pakistan*), L 6/73-31, adult on leaf of *Lonicera quinquelocularis*, C.I.E. A 6545. Paratypes 3♂(1457, 1459 &1460) 1♀(1458), same data as holotype; 4♀(1486), C.I.E. A 7171, other data same as holotype. All in the B.M. (N.H.), London.

The generic and specific names of this new genus and species are in honour of my colleague Dr. Feyzi Önder, specialist on Miridae of Europe particularly Turkey and other Balkan states.

Macrotylus Fieber

Macrotylus Fieber, 1858, ***Wien. ent. Monatschr. 2***, 325. Type species, ***Mocrotylus luniger*** Fieber, ***ibid.,*** 340, a synonym of ***Macrotylus quadrilineatus*** (Schrank), 1785, ***Neues Mag. Liebh. Ent. (4) 2,*** 339, as ***Cimex.***

Macrotylus suhaili sp.n.

Characterised by the apical location of the gonopore of vesica and the colour of body especially that of the 1st antennal segment and of the hemelytra.

Colour: Light smoky greenish yellow, frosted and dull with dark markings on pronotum and antennae; head, basal half with smoky markings, apical half creamy yellow, lorae black, eyes dark brown, 1st antennal segment black with a small spot at base and a narrow ring at apex creamy, base of 2nd segment and an undefined area beyond 1/4th basal length and upto just beyond middle point and apex narrowly smoky yellow, 3rd and 4th segments black except a minute area at base of 3rd and at tip of 4th greyish yellow; rostrum, 1st and 2/3rd of 2nd segment pale smoky, distal 1/3rd of 2nd, and 3rd and 4th segments totally black; pronotum, anterior margin narrowly green, calli dark, disc pale smoky showing through dark mesonotum, scutellum and hemelytra of same colour as disc of pronotum, mesosternum black, pleural region pale creamy yellow mixed with undefined small areas of smoky and greenish colour, dorsum of abdomen mostly dark, apex yellow, sternal area greenish yellow; legs, except dark apical area of tibiae and entire tarsi straw-coloured. Pubescence black.

Measurements (mm) ♂(♀): Head, width across eye 0.76(0.73), of vertex between eyes 0.28(0.38), median length 0.71(0.71); pronotum, width at base 1.32(1.42), median length 0.66(0.66); scutellum, width at base 0.61(0.66), median length 0.42(0.47); length of cuneus 0.89(0.76), width at base 0.38(0.38); length of antennal segments 1st, 2nd, 3rd and 4th, respectively, 0.28(0.28), 1.19(1.23), 0.76(0.76) and 0.38(0.35); total body length 4.74(4.74).

Structure : Body elongate narrow; head with a short 'neck' keeping very prominent eyes well away from anterior margin of pronotum not

touching posterior margin of head broadly, rostrum reaching between hind coxae, third antennal segment gently yet appreciably bowed (fig. 61); calli almost touching each other in middle, posterior margin of mesonotum exposed ***i.e.*** not covered by pronotum, scutellum convex but not swollen, length of cuneus twice its width at base; 3rd segment of hind tarsus subequal to 2nd segment, claw not longer than width of 3rd tarsal segment, not 'U'-shaped but gently curved, pulvillus (pseudoarolia) not extending beyond tip of claw; pygophore without swellings or similar structures, left paramere with both'claws' developed, right paramere not elongate, almost subquadrate, apical sheath of theca at right angle to it, vesica with an apical process extended beyond its tip, opening apical (unlike subapical in other species), apical process with a basal short bifurcate hook. Bursa copulatrix, sclerotised rings and A structures as in figs. 71 &72.

Material studied : Holotype ♀(1715), Pakistan, Rawalpindi, 20. iv. 1976, (***C.I.B.C., Pakistan***), adult on unidentified weed, Labiatae, CIBC LRP 4176-2, C.I.E. A8814. Paratypes 2♂(1717,1719), 4♀(1713, 1714,1716& 1718), same data as holotype. All in the British Museum (Natural History), London.

Comments : The new species runs nearest to either ***M. nigricornis*** Fieber or ***M. bipunctatus*** Reuter (keys to European Hemiptera by Stichell, 1958). From ***M. nigricornis*** it clearly differs in its coloration and other characters and from ***M. bipunctatus*** it mainly differs by colour of antennae, pronotum and membrane of hemelytra. ***M. antennalis*** Horvath (Asia Minor), ***M.perdictus*** Kirischenko (Iran, Turkey, Cyprus and Syria) and ***M. seidenstuckeri*** Wagner (Turkey) were described from areas which are either close to the origin of the new species or have similar climate. First antennal segment of ***M. antennalis*** is annulate whereas this of the new species is totally black; ***M. perdictus*** has head, pronotum and hemelytra well marked with colour pattern and ***M. seidenstuckeri*** has red brown head, which are different from those of the new species. The claws of ***M. suhaili*** sp.n. are similar to those of the subgenera ***Macrotylus*** and ***Alloeonycha*** whereas its vesica resembles that of only ***Macrotylus.*** Together with ***M. seidenstuckeri, M. perdictus*** and ***M. antennalis,*** the new species may belong to the subgenus ***Macrotylus s. str.*** of Wagner (1969). The type species of this subgenus is ***M. quadrilineatus*** (Schrank) whose opening of vesica is subapical followed by a prolonged apex which is crossed over by the apical 'appendex'. This 'appendex' is either divergent from (***Macrotylus s.s.***) or superimposed by (***Alloeonycha*** and ***Pontodemus***) the main vesica. In the new species the 'appendex' does not totally superimpose the main vesica, but at the same time is not divergent from it either. This peculiar condition coupled with the narrow posterior margin of the head, gives a clear distinction to

the new species. Wagner (1969) resurrected ***Alloeonycha*** Reuter from the synonymy of ***Macrotylus***, giving it the status of a subgenus and created a new subgenus ***Pontodemus***. These subgenera are based on the shape of claws and vesica. Whether the shape of vesica of the new species together with the form of its claws, pygophore and head would invalidate the resurrection of ***Alloeonycha*** or, alternately, justify the creation of yet another new subgenus will depend on the discovery of more species to form a group with ***M. suhaili*** sp. n.

Acknowledgements

The writer takes this opportunity to acknowledge with grateful thanks the help given by the following persons: Dr. P. Freeman, Keeper of Entomology and Dr. W. J. Knight, British Museum (Natural History), London; Dr. M. A. Ghani, C.I.B.C., Rawalpindi, Pakistan; Dr. Feyzi Önder, Izmir, Turkey. Dr. J.C.M. Carvalho, during his visit to the B.M. (N.H.), London, gave me an opportunity and kindly looked at the material and the illustrations of ***Onderothops feyzii*** gen. et sp. n.

Summary

Two new genera, ***Montanorthops*** and ***Onderothops*** and two new species, ***Onderothops feyzii*** and ***Macrotylus suhaili***, of Miridae from Pakistan are described in this paper. ***Camptobrochis qualis*** Distant is designated as the type species of the genus ***Montanorthops*** and is transferred from the subfamily Deraeocorinae to Mirinae; three other species, ***Orthops foreli*** Fieber, ***Orthops sanguinolentus*** Reuter and, ***Ortops montanus*** (Schilling) are now included in the new genus ***Montanorthops*** which is compared with the genera, ***Orthops***, ***Camptozygum*** and, of course, with ***Deraeocoris***; all the species are redescribed and illustrated and a key to separate them is given. The genus ***Onderothops*** is compared with the genera ***Orthops***, ***Neolygus***, ***Lygus***, ***Apolygus*** and ***Poecilocapsus***. The male genitalia of the new species, ***Macrotylus suhaili*** presented a peculiar condition which prevented the assignment of the new species to any of the subgenera of the genus ***Macrotylus***.

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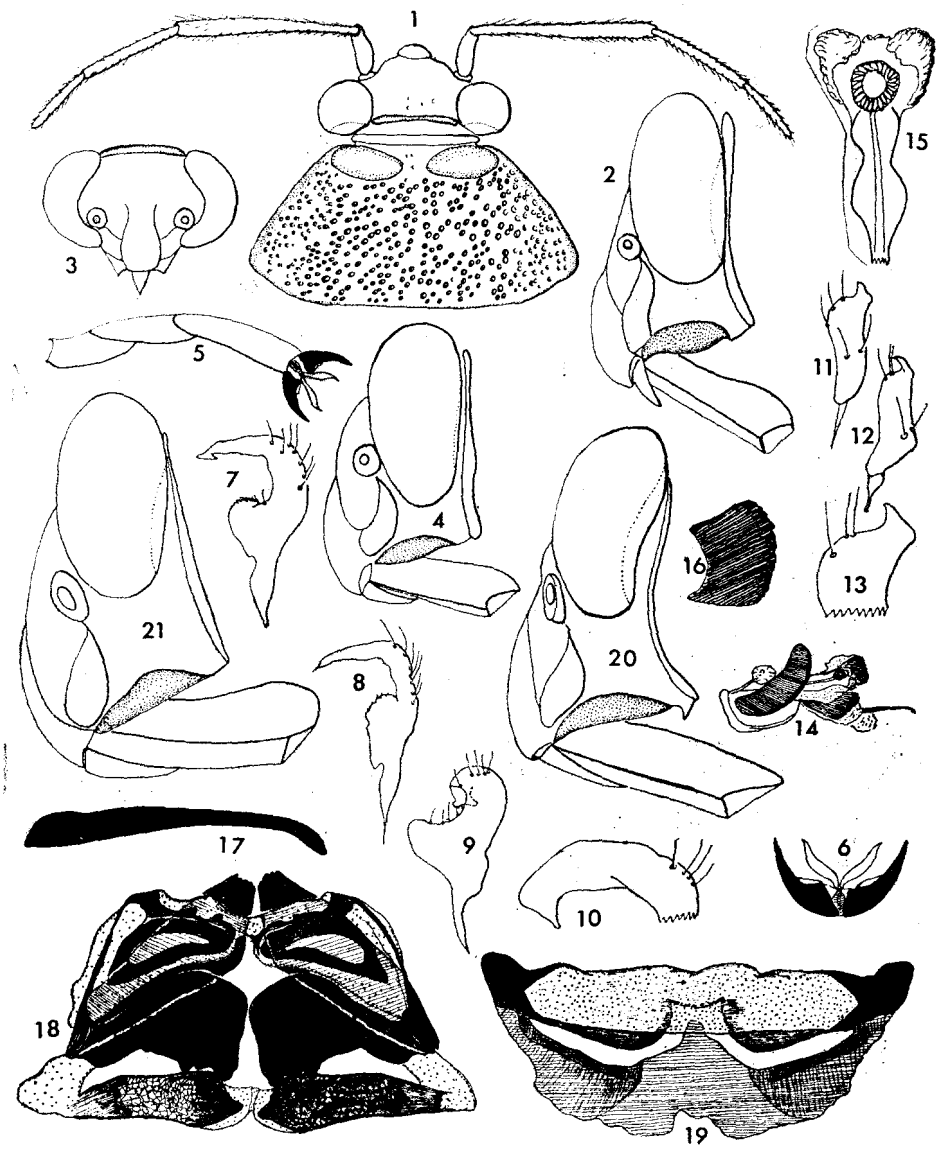
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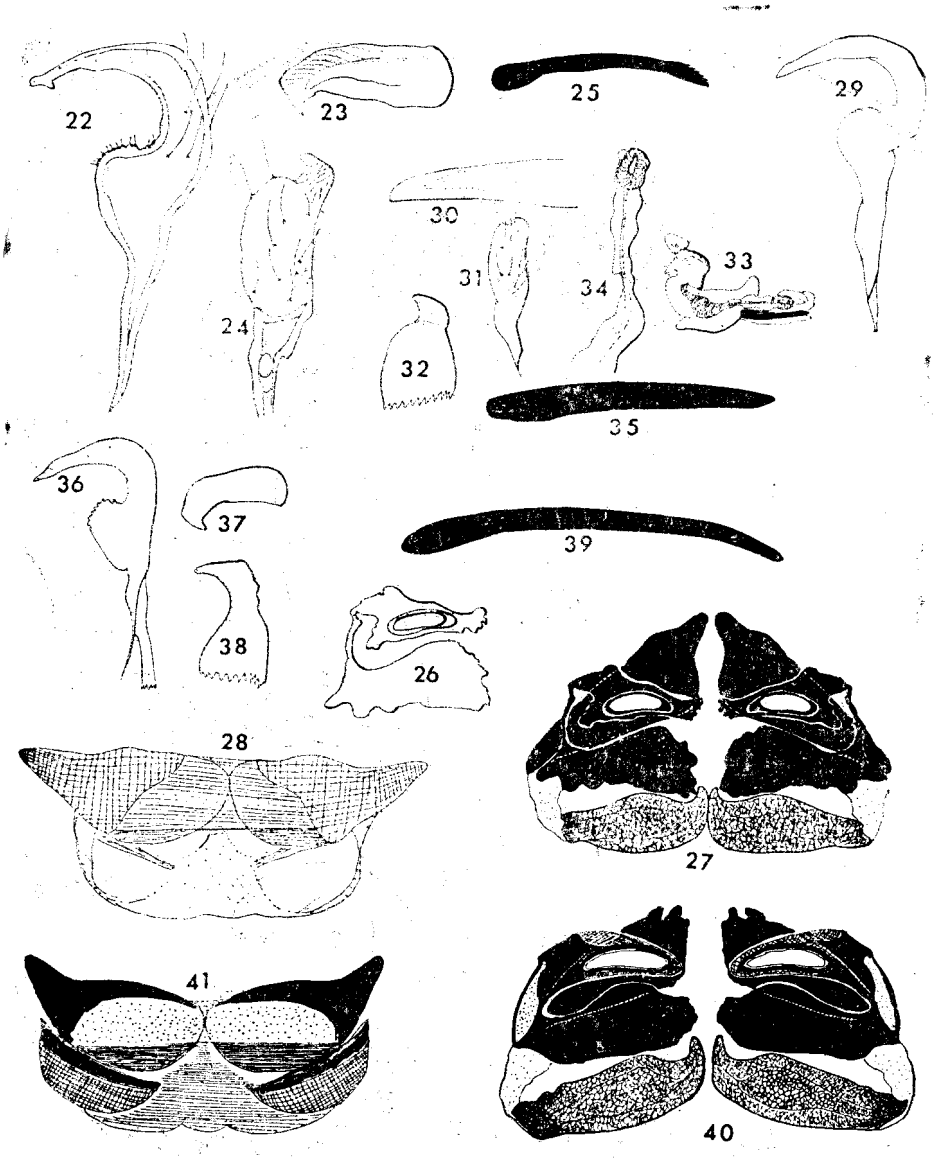
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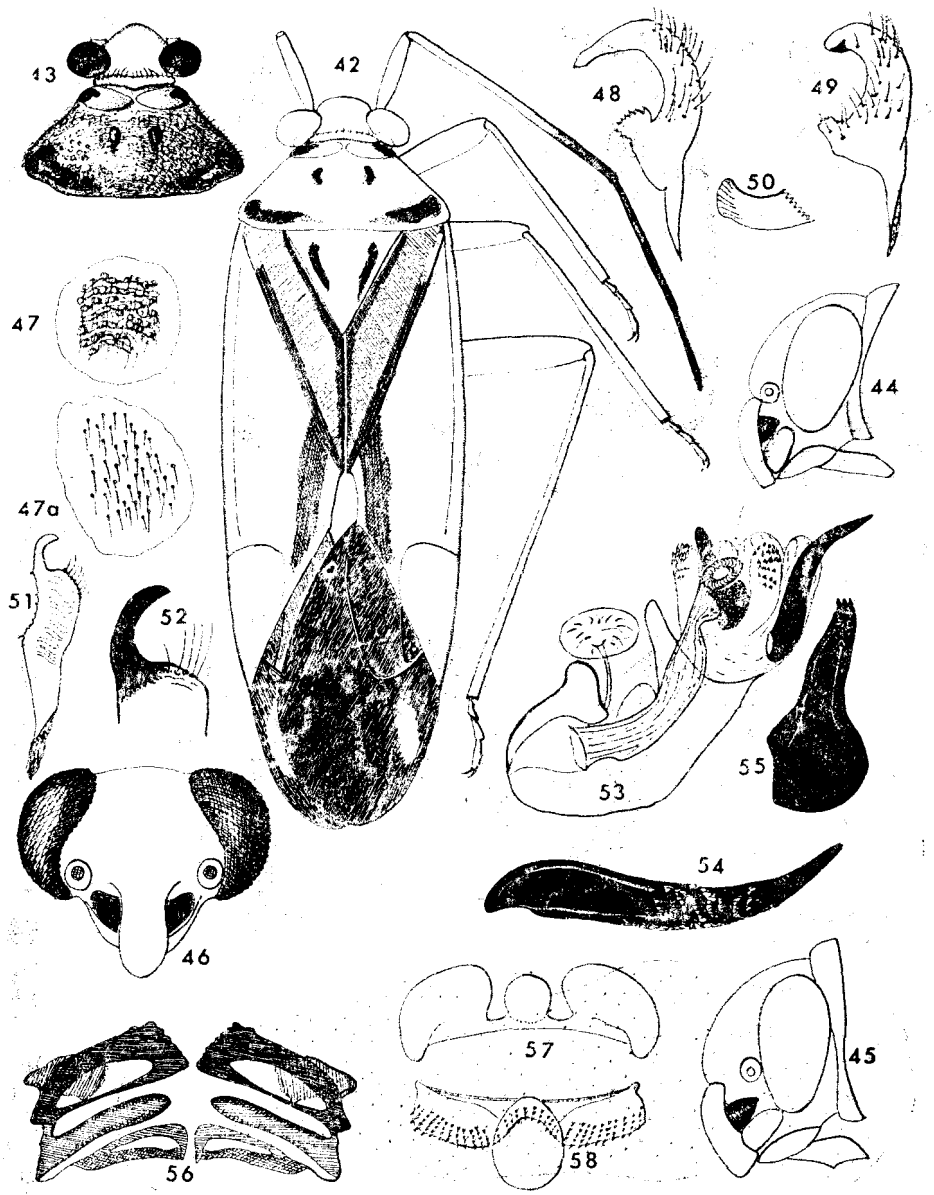
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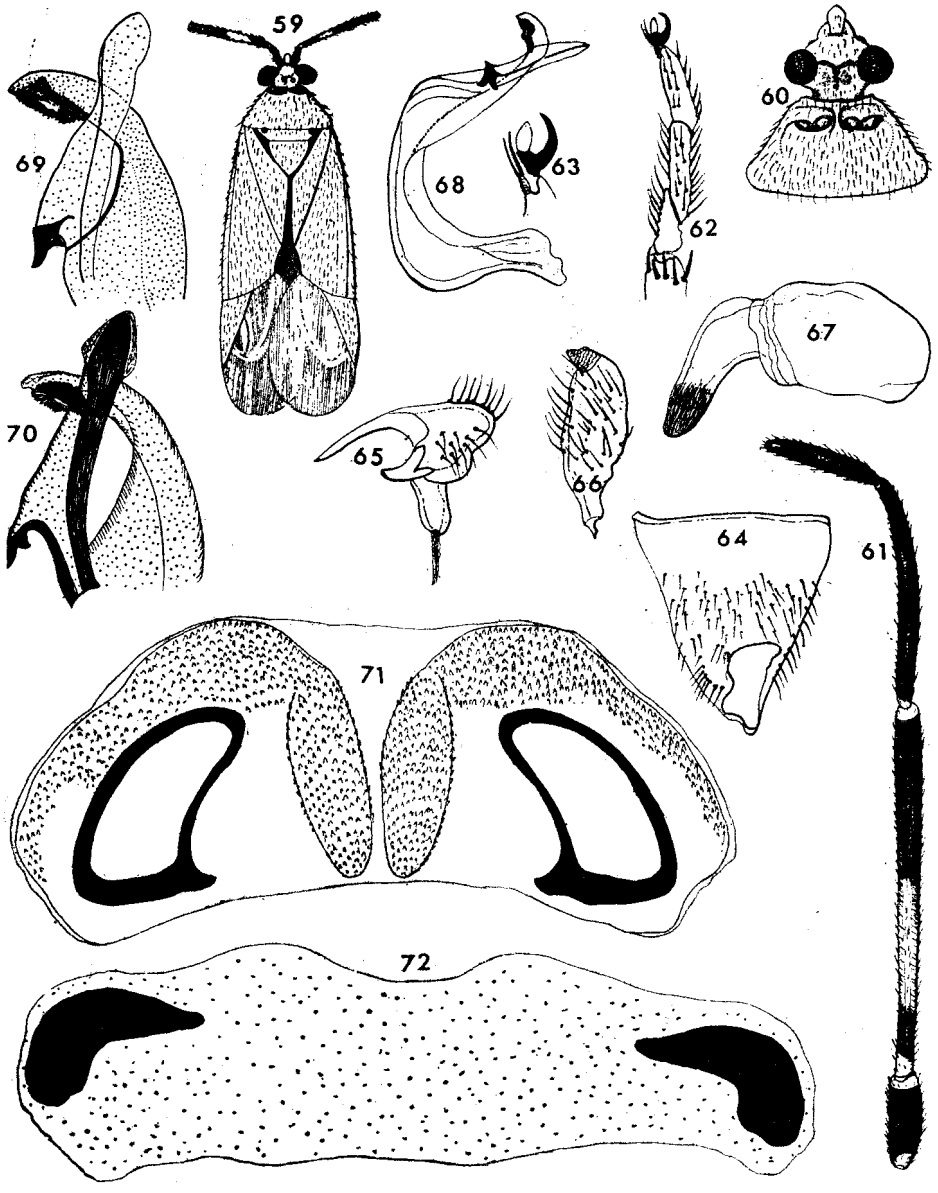
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