

·022 mm. As my specimen, however, is mounted on its side, there is doubtless some foreshortening due to the lateral curve of the spur.

Habitat.—Te-ring Gompa, 14,000 feet. 17th May, 1907.

These animals were by no means of frequent occurrence. I believe that I did not find more than three or four specimens in six months' work.

Lepidoderma squammatum has been recorded from Germany, France, England, Austria and North America (Zelenka).

Technique.—For the two groups of Rotifers and Gastrotricha the only form of technique employed was that of Rousselet—cocaine, osmic acid and formalin (*Journ. Queckett Micr. Club*, vol. v, p. 1), asphalt being used as a cement. This method gave excellent results for observation within three or four months, and about thirty per cent. of the specimens were found to be in very fair condition after fifteen months, in some cases in such a good state of preservation as to repay examination with a $\frac{1}{2}$ -inch oil immersion lens. When it is considered that the slides had made a road journey of two hundred miles, and had endured extremes of climate from the cold of the Tibetan passes in mid-winter to the full heat of the hot weather in Calcutta, the method may be regarded as having been tested under somewhat adverse conditions, and to have come well out of the test.

ENTOMOSTRACA ET HYDRACHNIDAE E TIBET.

[Cum Figuris 9 in Textu.]

PROF. E. DADAY DE DEES.

Illustr. Dom. F. H. Stewart anno 1907 in Tibet ex aliquot localitatibus inter alia etiam materiam planctonicam collegii quam Illustr. Dom. N. Annandale, Superintendens Musei Indian Historiae Naturalis studiendi causa Entomostracorum Hydrachnidarumque ad me misit. Commissionem hanc honorabilem, literatura datis de Entomostracis Hydrachnidisque in Tibet occurrentibus hucusque exceptis ab Illustr. D. G. O. Sars publicatis carente, libenter accepi resultatemque studii mei in subsequentibus breviter conscribere necessarium esse putavi. Notandum est, collectionem Dom. F. H. Stewarti in 17 vitris et e 4 localitatibus species 21 infra partim enumeratas, partim descriptas continere.

Localitates materiae planctonicae examinatae sunt sequentes :—

1. *Mang-tsa*, altitudine 4419·5 mtr. a superficie maris; anno 1907, 2 Julii—2 vitra.

2. *Gyantse*, altitudine 3998·9 mtr. a superficie maris; anno 1907, 4 Augusti, 9 Septembris et 6 Novembris—8 vitra.
3. *Rham-Tso*, altitudine 4480·5 mtr., a superficie maris; anno 1907, 12 Augusti—3 vitra.
4. *Kang-ma*, altitudine 4267·1 mtr., a superficie maris; anno 1907, 18 Augusti—1 vitrum.

I.—SPECIES EXAMINATAE SECUNDUM LOCALITATES CONSCRIPTAE.

1. *Mang-tsa.*

Simocephalus elizabethae (King).

Herpetocypris stewarti, n. sp.

2. *Gyantse.*

Cyclops strenuus (Fisch).		Alona guttata, G. O. Sars.
Cyclops viridis (Jur).		Simocephalus elizabethae
Cyclops serrulatus (Fisch).		(King).
Diaptomus tibetanus, n. sp.		10. Scapholeberis mucronata
5. Diaptomus paulseni, G. O. Sars.		(O. F. M).
Chydorus sphaericus (O. F. M).		Daphnia longispina, Leyd.
Dunhevedia crassa, King.		Potamocypris stewarti, n. sp.
		13. Eulais tibetana, n. sp.

3. *Rham-Tso.*

Cyclops viridis (Jur).		Moina rectirostris (Jur).
Cyclops serrulatus, Fisch.		Ceriodaphnia pulchella, G. O. Sars.
Diaptomus paulseni, G. O. Sars.		Sars.
Chydorus sphaericus (O. F. M).		Simocephalus elizabethae
5. Euryalona annandalei, n. sp.		(King).
Macrothrix hirsuticornis (Br. Nr.).		10. Herpetocypris smaragdea, n. sp.

Eucypris tibetana, n. sp.

4. *Kang-ma.*

Eucypris minuta, n. sp.

II.—CONSPECTUS SYSTEMATICUS SPECIERUM EXAMINATARUM
DESCRIPTIONESQUE SPECIERUM NOVARUM.

Ordo COPEPODA.

(1) *Cyclops viridis* (Jur).

Cyclops viridis, O. Schmeil (9), p. 97, tab. 8, fig. 12-14.

Specimina numerosa e localitatibus *Gyantse* et *Rham-Tso* collecta examinavi.

(2) *Cyclops strenuus*, Fisch.

Cyclops strenuus, O. Schmeil (9), p. 39, tab. 2, fig. 12-15.

Cyclops strenuus, W. Lilljeborg (2), p. 28, tab. 2, fig. 20-25.

Specimina numerosa e localitate *Gyantse* collecta examinavi haecque structura pedis quinti paris formae *Cyclopis strenui* formae *lacustris*, Lillj., similia sunt.

(3) *Cyclops serrulatus*, Fisch.

Cyclops serrulatus, O. Schmeil (9), p. 141, tab. 5, fig. 6-14.

Species haec cosmopolita in Tibet frequens esse videtur. Specimina numerosa e localitatibus *Gyantse* et *Rham-Tso* collecta examinavi in societate *Cyclopis viridis* et *strenui*.

(4) *Diaptomus tibetanus*, n. sp.

(Fig. 1, a-e.)

Corpus antice parum angustatum, segmento primo longitudinem segmentorum trium segmentorum simul junctorum superante. Segmentum ultimum thoracicum feminae distinctum angulis lateralibus posticis productis, lamelliformibus, magnitudine parum diversis (fig. 1, a). Angulus laminiforme productus sinister dextro parum longior latiorque, aculeo sat magno externo armatus. Angulus dexter brevior angustiorque aculeo externo parvo. Segmentum ultimum thoracicum maris angulis lateralibus posticis parum productis, apice acute rotundatis.

Abdomen feminae triarticulatum, articulo genitali duobus ultimis simul junctis longiore. Abdomen maris 5-segmentatum, segmentis 4 ultimis fere aequilongis.

Laminae furcales longitudine segmentum ultimum abdominale superantes, margine interno setosae.

Antennae primiparis feminae 25-articulatae, retrorsum vergentes apicem laminarum furcalium attingentes vel parum superantes.

Antenna geniculans maris articulo 13 aculeo valido, longo, falciformi armato. Articulus ultimus antennae geniculantis in apice hamulo parvo, introssum vergenti (fig. 1, e).

Pedes quintiparis feminae articulo ultimo exopoditi biaculeato, aculeis sat crassis, endopodito uniarticulato, digitiformi, longitudinem dimidiam articuli primi exopoditi parum superante, apice distali biaculeato, aculeo externo longiore, interno vero brevior (fig. 1, b).

Protopoditum pedis dextri quintiparis maris articulo primo in angulo externo-distali processu lobiformi, articulo secundo cum endopodito connato, marginibus laevibus. Articulus primus exopoditi angulo externo-distali mucronato, mucrone valido, in margine interiori parum tuberculatus. Articulus secundus exopoditi

fere cuneiformis, apicem versus valde angustatus, aculeo valido, curvato, ab apice distali valde remoto, in parte tertia basali sito. Unguis apicalis exopoditi falciformiter valde arcuatus, longitudine articulos tres antecedentes parum superans (fig. 1, *d*). Endopoditum uniarticulatum, perbreve, longitudinem dimidiam articuli primi exopoditi non superans, cuneiformi, extrorsum vergens.

Articulus secundus protopoditi pedis sinistri quinti paris margine interiore laevi. Articulus secundus exopoditi in margine

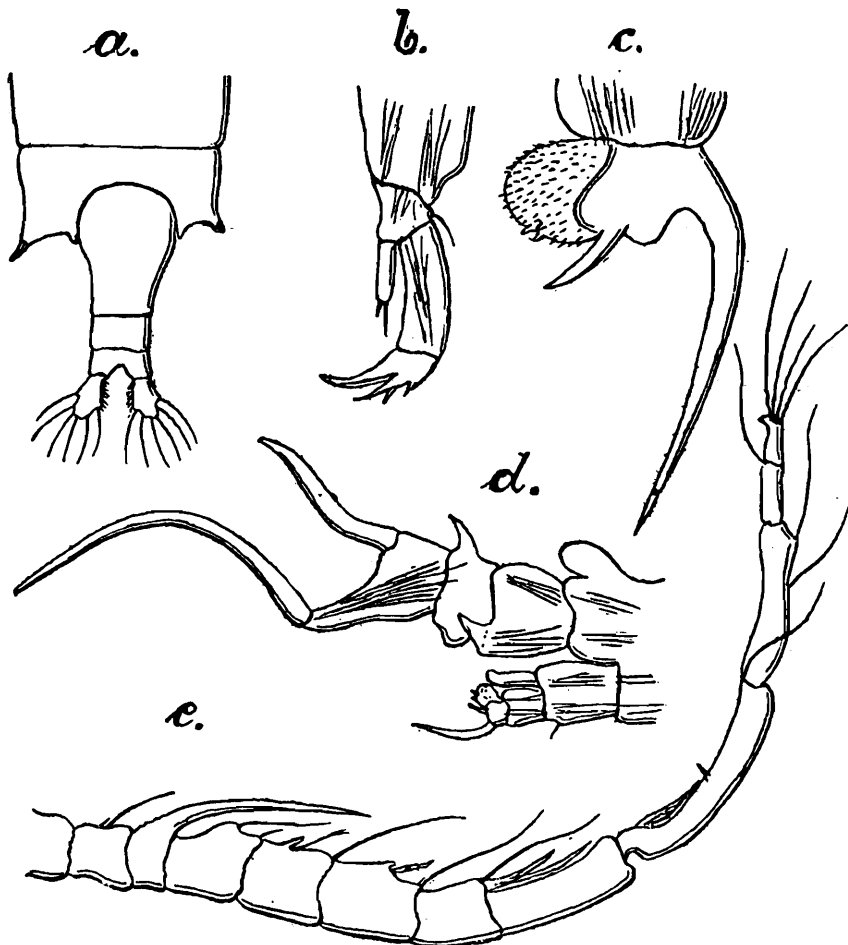


FIG. 1.—*Diaptomus tibetanus*, n. sp.

- (a) Segmenta duo posteriora trunci cum abdomine feminae.
- (b) Pes quinti paris feminae.
- (c) Apex pedis quinti paris sinistri maris.
- (d) Pedes quinti paris maris.
- (e) Pars media antennae geniculantis maris.

interno lobiformiter prominens, lobo rotundato, dense piloso aculeisque parvis 3-4 armato, in margine apicali aculeo brevior, in angulo externo apicali aculeo valido parum falciformi praeditus (fig. 1, *c*, *d*). Endopoditum huius pedis uniarticulatum, digiti-forme, longitudine articulum primum exopoditi plusminusve superans.

Longitudo totalis feminae 2 mm.; maris 1.8 mm.

Specimina numerosa e localitate *Gyantse* collecta examinavi,

Species haec nova differt a speciebus ceteris: structura pedum quintiparis feminae precipueque maris.

(5) *Diaptomus paulseni*, G. O. Sars.

(Fig. 2, a, b.)

Diaptomus paulseni, G. O. Sars (7), p. 20, tab. 15, fig. 1, a-f.

Species haec adhuc solum e Pamir cognita etiam in Tibet sat frequens esse videtur. Specimina numerosa examinata e localitatibus *Gyantse* et *Rham-Tso* collecta solum structura antennae

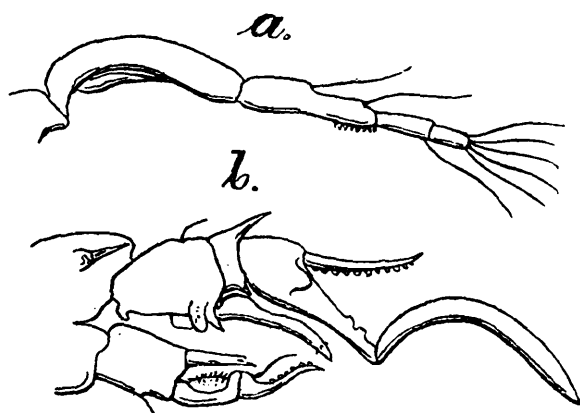


FIG. 2.—*Diaptomus paulseni*, G. O. Sars.

- (a) Pars apicalis antennae geniculantis maris.
(b) Pedes quinti paris maris.

geniculantis pedumque quinti paris maris differunt a speciminibus adhuc descriptis. Articulus antepenultimus antennae geniculantis scilicet in parte ultima marginis interioris denticulis minutis, serratim ordinatis armatus (fig. 2, a). Articulus secundus exopoditi pedis quintiparis dextri maris prope basin aculei lateralis lamina lobiformi et in margine exteriori prope basin unguis apicalis tuberculis duobus parvis armatus. Endopoditum pedis sinistri quintiparis apicem versus attenuatum, apice bifisso, aculeo minore interno, externo vero majore (fig. 2, b).

Subordo CLADOCERA.

(6) *Chydorus sphaericus* (O. F. M.).

Chydorus sphaericus, W Lilljeborg (1), p. 561, tab. 77, fig. 8-25.

Species haec cosmopolita in Tibet sat frequens esse videtur et ego exemplaria numerosa in materiam e localitatibus *Gyantse* *Rham-Tso*que inveni.

(7) *Dunhevedia crassa*, King.

Dunhevedia crassa, G. O. Sars (3), p. 42, tab. 5, fig. 1-4.

Specimina solum duo feminina examinaui e localitate *Gyantse*.

Species haec fere cosmopolita etiam e Ceylon et e Siberia (Akmolinsk) cognita.

(8) *Alona guttata*, G. O. Sars.

Lynceus guttatus, W. Lilljeborg (1), p. 468, tab. 68, fig. 16-26.

Species haec etiam e Turkestan enumerata in Tibet sat rara esse videtur, specimina non numerosa solum e localitate *Gyantse* examinavi.

(9) *Euryalona annandalei*, n. sp.

(Fig. 3, a-c.)

Testa corporis subrotundata, margine dorsali late arcuato, marginem versus posteriorem flexuoso et cum margine posteriore angulum acutum, parum prominentem formante. Margo posterior testae in parte superiore parum sinuatus, in parte inferiore rotundatus et in marginem ventralem sine limite visibili ineuns. Margo ventralis testae ante medium parum prominens, in parte posteriore subrectus et in marginem anteriorem sine limite ineuns,

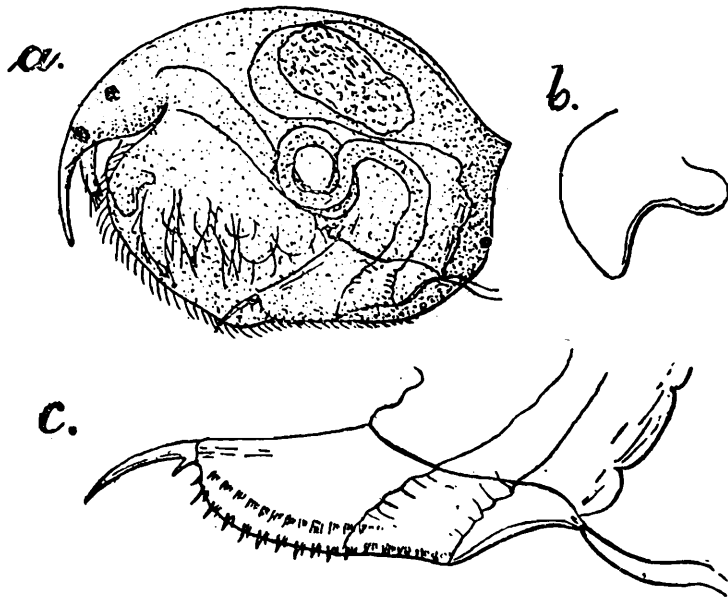


FIG. 3.—*Euryalona annandalei*, n. sp.

- (a) Femina a latere visa.
- (b) Processus labri.
- (c) Cauda a latere visa.

setis parvis armatus (fig. 3, a). Superficies testae concinne granulata.

Caput rostro sat longo, parum arcuato tenuique, sub lineam medianam testae declinato.

Oculus sat magnus; macula ocularis magnitudine oculi, oculo multo quam apice rostri proprior.

Antennae primi paris sat breves, longitudinem dimidiam rostri non superantes.

Processus labri sat parvus, antice late, infra acute rotundatus (fig. 3, b).

Cauda apicem distalem versus parum angustata, margine posteriore vel superiore ultra fissuram analem usque ad partem

tertiam apicalem subrecto, in parte tertia arcuato, serie aculeorum marginalium circa 12-14 serieque laterali aculeorum minimorum fasciculatim dispositorum. Aculei marginales in poribus ordinati, unus major, alter minor tenuiorque, unguis apicalis caudae laevis aculeo basali parvo (fig. 3, c).

Longitudo totalis 0.9—1 mm. ; altitudo maxima 0.6—0.65 mm.

Species haec nova in honorem Illustr. D. N. Annandale, denominata forma, longitudine structuraque rostri, testae precipueque caudae differt a speciebus ceteris generis. Specimina solum tres feminina examinavi e localitate *Rham-Tso*.

(10) *Macrothrix hirsuticornis*, Brady-Norm.

Macrothrix hirsuticornis, *W Lilljeborg* (1), p. 346, tab. 55, fig. 6-14.

Speciei huius etiam e Mongolia enumeratae, solum specimina tres examinavi e localitate *Rham-Tso*.

(11) *Moina rectirostris* (Jur).

Moina rectirostris, *W Lilljeborg* (1), p. 216, tab. 29, fig. 23-30, tab. 30, fig. 1-12.

Specimina 7 ♀ et 1 ♂ vidi e localitate *Rham-Tso*. Species haec in Europa et in America boreali frequens occurit etiam in Siberia (Akmolinsk) et in Mongolia.

(12) *Ceriodaphnia pulchella*, G. O. Sars.

Ceriodaphnia pulchella, *W Lilljeborg* (1), p. 198, tab. 28, fig. 6-18.

Speciei huius in Asia sat frequentis et e Siberia Turkestanque jam cognitae solum exemplaria tria examinavi e localitate *Rham-Tso*.

(13) *Scapholeberis mucronata* (O. F. M.).

Scapholeberis mucronata, *W. Lilljeborg* (1), p. 151, tab. 22, fig. 15-19, tab. 23, fig. 1-7.

Species haec distributione geographica sat constricta etiam in Asia sat frequens esse videtur, enumerata est scilicet e Ceylon et e Siberia. Specimina non numerosa, a me examinata sunt e localitate *Gyantse* collecta.

(14) *Simocephalus elizabethae*, King.

Simocephalus elizabethae, *G. O. Sars* (3), p. 22, tab. 2, fig. 6-7.

Simocephalus gibbosus, *G. O. Sars* (4), p. 15, tab. 2, fig. 4-6.

Simocephalus vetuloides, *G. O. Sars* (5), p. 5, tab. 6, fig. 11-12.

Simocephalus mixtus, *G. O. Sars* (5), p. 18, tab. 6, fig. 4.

Species haec in Asia frequens esse videtur. Secundum opinionem meam species supra enumeratae synonymae sunt et

non dubito quin ipsam species *Simocephalus elizabethae* propter affinitatem magnam *Simocephali vetuli*, varietas sit.

Specimina numerosa vidi e localitatibus *Mang-tsa*, *Gyantse* et *Rham-Tso* itaque species haec in Tibet frequentissima esse videtur.

(15) *Daphnia longispina* (O. F. M.).

Daphnia longispina, *W Lilljeborg* (1), p. 94, tab. 12, fig. 14, tab. 13, fig. 1-8, tab. 14, fig. 1-9.

Speciem hanc iam a *D. G. O. Sars*, e Tibet cum varietate *caudata* enumeratam solum e localitate *Gyantse* examinavi hincque specimen unicum vidi.

Ordo OSTRACODA.

(16) *Eucypris tibetana*, n. sp.

(Fig. 4, a-f.)

Conchae ambae forma structuraque similes, a latere visae fere oviformes, altitudine maxima dimidiam longitudinem parum superante.

Margo anterior concharum altitudine posterioris remota, regulariter et acutiusculo rotundatus, lamina hyalina canalibusque pororum carens, tuberculis minimis, setigeris; in marginem dorsalem ventralemque sine limite visibili ineuns (fig. 4, a).

Margo dorsalis concharum late rotundatus, in parte anteriore parum humiliter flexuosus, in parte posteriore late arcuatus et in marginem posteriorem arcuato-flexuoso sineque limite visibili ineuns.

Margo posterior concharum altitudine anteriorem superans, sat late regulariterque rotundatus, lamina hyalina canalibusque tuberculisque minimis carens, in marginem ventralem sine limite visibili ineuns (fig. 4, a).

Margo ventralis concharum rectus, non sinuatus, structura marginibus ceteris simili.

Conchae de conspectu dorsali aut ventrali oviformes, antice acute, postice sat late rotundatae, latitudine maxima post medium sita (fig. 4, b).

Testa concharum concinne granulata superficie sat dense setosa. Color ignotus.

Longitudo maxima 1.5—1.8 mm.; altitudo maxima 0.8—1 mm.; latitudo maxima 0.7—1.0 mm.

Antennae secundi paris endopoditi triarticulato fasciculoque setarum natatorium usque ad apicem unguiculorum apicalium vergente. Articulus penultimus unguiculis tribus, denticulatis uno brevioribus duobus multo longioribus armatus. Articulus ultimus in apice unguiculis duobus diversis, uno brevioribus laevique, altero longioribus et denticulato (fig. 4, c).

Palpus maxillaris articulo apicali longioribus, quam latioribus.

Processus manducatorius primus maxillarum in apice aculeis duobus validis, denticulatis (fig. 4, *d*).

Pedes maxillares forma structuraque specierum ceterarum similes.

Pedes primi paris articulis duobus antepenultimis in superficie setosis, articulo penultimo in angulo anteriore distali setis duabus

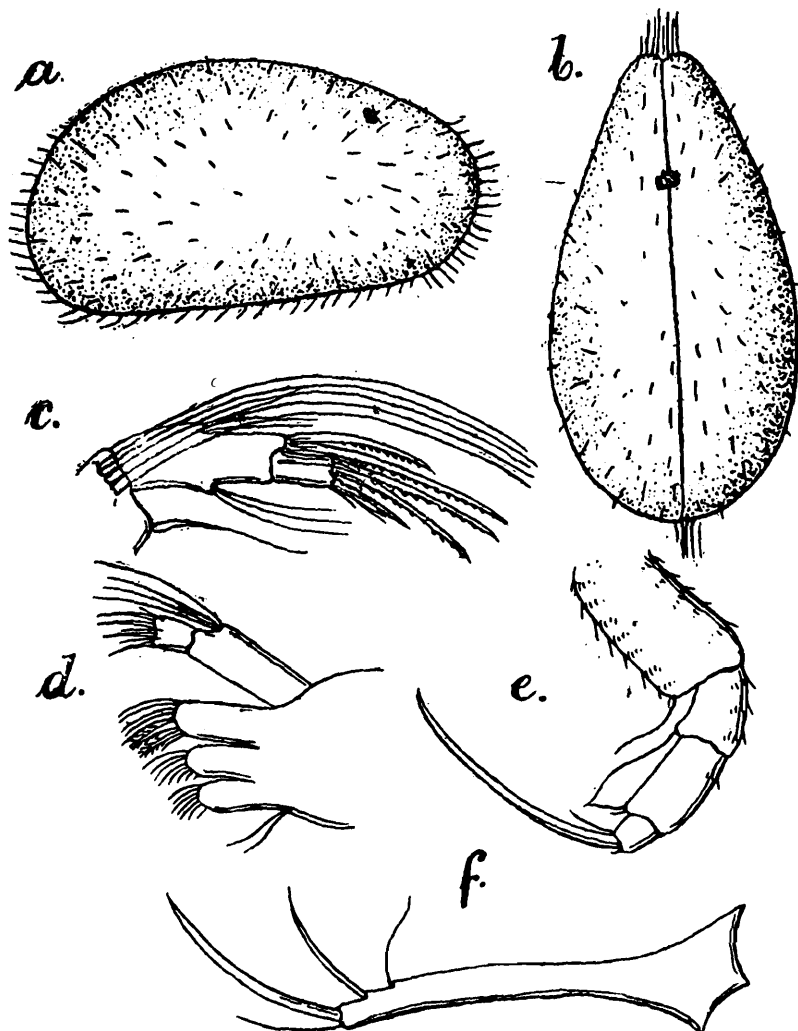


FIG. 4.—*Eucypris tibetana*, n. sp.

- (a) Concha dextra a latere visa.
- (b) Conchae supra visae.
- (c) Endopoditum antennae secundi paris.
- (d) Maxilla.
- (e) Pes primus.
- (f) Lamina furcalis.

inaequalibus. Unguiculus apicalis longitudinem articulorum 3 ultimorum pedis superans, parum falciformiter arcuatus (fig. 4, *e*).

Laminae furcales fere rectae, minime curvatae, margine posteriore vel superiore laevi, seta laterali ad unguiculum lateralem approximata; unguiculo laterali dimidiam longitudinem unguiculi apicalis superante; unguiculo apicali fere longitudine dimidia laminae furcalis; seta apicali longitudine dimidia unguiculi apicalis.

Specimina numerosa ♀ examinavi e localitate *Rham-Tso*.

Species haec nova speciei *Cyprinotus congener*, Vavr., affinis, sed differt inter alia structura marginis anterioris posteriorisque concharum.

(17) *Eucypris minuta*, n. sp.

(Fig. 5, a-c.)

Conchae ambae inter se similes, a latere visae parum reniformes, altitudine maxima longitudinem dimidiam non attingente (fig. 5, a).

Margo anterior concharum fere altitudine marginis posterioris, late rotundatus, in parte inferiore acutiusculo arcuatus, in parte superiore vero flexuoso arcuatus, in marginem dorsalem ventralemque sine limite visibili ineuns, lamina hyalina canalibusque pororum carens (fig. 5, a).

Margo dorsalis concharum late arcuatus, in parte anteriore

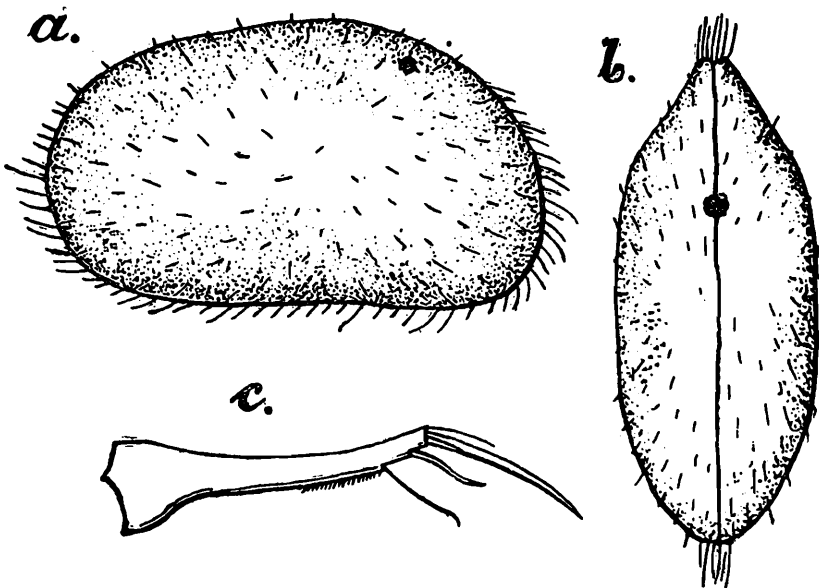


FIG. 5.—*Eucypris minuta*, n. sp.

- (a) Concha dextra a latere visa.
- (b) Conchae supra visae.
- (c) Lamina furcalis.

tamen altior, marginem versus posteriorem leniter flexuosus et in marginem posteriorem sine limite visibili ineuns.

Margo posterior latiusculo aequaliterque rotundatus, lamina hyalina canalibusque pororum carens, in marginem ventralem sine limite visibili ineuns.

Margo ventralis subrectus, fere in medio minime sinuatus, structura marginis posterioris aequali.

Margo anterior conchae sinistrae lamina hyalina valde angusta.

Conchae supra aut infra visae fere formam navicellae imitantes, apice anteriore acutiusculo, apice posteriore acute rotundato, latitudine maxima in medio (fig. 5, b).

Valvulae concharum superficie concinne granulata sparsimque setosa. Color brunneus. Longitudo 1.2—1.5 mm.

Antennae secundi paris endopodito triarticulato, fasciculo setarum natatoriarum apicem unguiculorum apicalium superante. Articulus penultimus in angulo superiore distali unguiculis duobus aequilongis, denticulatis setisque duabus longis armatus. Articulus ultimus in apice unguiculis duobus validis, denticulatis setaque parva.

Articulus penultimus palpi mandibularis processu aculeiformi, dense setoso, sensorio.

Palpus maxillaris articulo apicali longiore, quam lato.

Processus manducatorius primus maxillae in apice aculeis duobus denticulatis.

Pedes maxillares, pedes primi secundique paris structura specierum ceterarum generis similes. Articulus penultimus pedum primi paris in angulo anteriore distali setis duabus inaequalibus.

Laminae furcales apicem distalem versus parum attenuatae, leviter arcuatae, margine posteriore vel superiore concinne setoso; seta laterali unguiculo laterali approximata, longitudinem unguiculi laterali parum superante; unguiculo laterali longitudinem dimidiam unguiculi apicalis non attingente; unguiculo apicali longitudinem dimidiam laminae furcalis parum superante, leviter arcuato; seta apicali brevi, fere longitudine tertia unguiculi apicali (fig. 5, c).

Specimina non numerosa (4 ♀ et 2 juv.) examinaui e localitate *Kang-ma*.

Species haec nova a speciebus ceteris generis differt forma structuraque concharum.

(18) *Herpetocypris stewarti*, n. sp.

(Fig. 6, a-k.)

(*Femina*, fig. 6, a-b.)

Conchae a latere visae reniformes, inter se parum dissimiles, altitudine maxima longitudinem dimidiam non attingente (fig. 6, a-b).

Concha dextra (fig. 6, a) a latere visa margine anteriore altitudinem posterioris superante sat acute regulariterque arcuato lamina hyalina carente, canalibus pororum distinctibus, rectis, non ramosis; in marginem dorsalem ventralemque sine limite visibili ineunte.

Margo dorsalis conchae dextrae marginem anteriorem versus flexuosus, supra oculum parum tuberculatus, in parte media late arcuatus, marginem posteriorem versus arcuate flexuosoque declinatus et in marginem posteriorem sine limite visibili ineuns (fig. 6, a).

Margo posterior margine anteriore humilior, acute arcuatus, in marginem ventralem sine limite visibili ineuns, lamina hyalina carens, canalibus pororum distinctis, rectis, non ramosis.

Margo ventralis conchae dextrae in medio parum sinuatus, ante sinum late arcuatus, post sinum subrectus, structura marginis anterioris posteriorisque simili (fig. 6, a).

Concha sinistra margine anteriore posterioreque fere aequalto (fig. 6, *b*).

Margo anterior conchae sinistrae acutiusculo arcuatus, in mar-

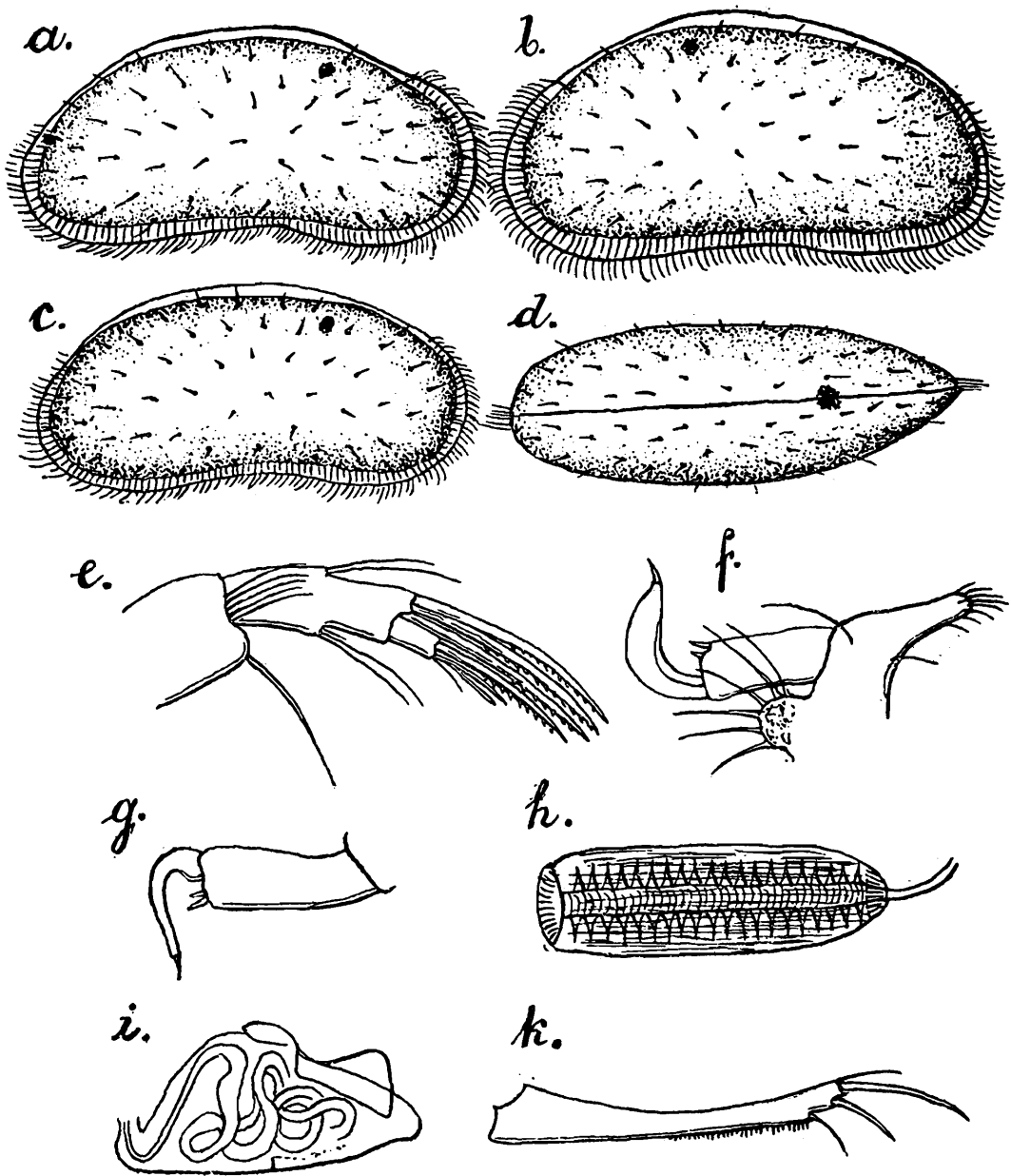


FIG. 6.—*Herpetocypris stewarti*, n. sp.

- (a) Concha dextra feminae a latere visa.
- (b) Concha sinistra feminae a latere visa.
- (c) Concha dextra maris a latere visa.
- (d) Conchae maris supra visae.
- (e) Endopoditum antennae secundi paris.
- (f) Pes maxillaris dexter maris.
- (g) Palpus pedis maxillaris sinistri maris.
- (h) Ductus ejaculatorius.
- (i) Penis.
- (k) Lamina furcalis maris.

ginem dorsalum ventralemque sine limite visibili ineuns, lamina hyalina carens, canalibus pororum rectis, non ramosis.

Margo dorsalis late arcuatus supra oculum minime protuberans,

antice posticeque arcuate flexuosus et in marginem posteriorem sine limite visibili ineuns (fig. 6, *b*).

Margo posterior conchae sinistrae obtuse rotundatus, cum margine ventrali angulum arcuatum formans, lamina hyalina carens, canalibus pororum rectis, non ramosis.

Margo ventralis in medio late sinuatus, ante sinum subarcuatus, post sinum subrectus, canalibus pororum rectis, non ramosis (fig. 6, *b*).

Conchae supra infraque visae formam navicellae imitantes apice anteriore acuto, posteriore vero rotundato, lateribus minime arcuatis, fere subrectis, latitudine maxima in medio sita.

Valvulae concharum superficie splendida, concinne granulata, setosa, setis parvis, sat rare dispersis; colore viridi.

Longitudo concharum 1.2—1.3 mm.; altitudo maxima 0.6—0.65 mm.; latitudo maxima 0.43—0.48 mm.

Antennae, mandibulae, maxillae, pedes laminaeque furcales structura iisdem maris similes.

(*Mas*, fig. 6, *c-k*.)

Conchae ambae forma structuraque fere similes, reniformes, altitudine maxima longitudinem dimidiam non attingente, in margine anteriore, posteriore ventralique lamina hyalina carentes, canalibus pororum rectis, non ramosis, ubique fere aequalongis (fig. 6, *c*).

Margo interior concharum altitudinem posteriorem superante, regulariter acutiusculo arcuatus, in marginem dorsalem ventralemque sine limite visibili ineuns (fig. 6, *c*).

Margo dorsalis late arcuatus in marginem anteriorem posterioremque aequaliter flexuoso declinatus, sine limite visibili.

Margo posterior anteriore humilior acutiusculo arcuatus, in marginem dorsalem ventralemque sine limite visibilis ineuns.

Margo ventralis concharum in medio late sinuatus, ante et post sinum fere aequaliter subarcuatus.

Conchae supra vel infra visae formam navicellae imitantes, apice anteriore acuto, posteriore vero rotundato, latitudine maxima in medio sita (fig. 6, *d*); structura coloreque feminarum similes.

Longitudo concharum 1.05—1.1 mm.; altitudo maxima 0.45—0.5 mm.; latitudo maxima 0.4 mm.

Antennae primi paris articulo ultimo setis duabus aculeoque laevi, elongato armato.

Articulus proximalis endopoditi antennarum secundi paris fasciculo setarum natatoriarum perbrevium, evanescentium. Articulus penultimus in angulo superiore distali unguiculis apicalibus tribus, aequalibus, denticulatis. Articulus ultimus in apice unguiculo apicali, denticulato, aculeo laevi, unguiformi, seta bacilliformi sensoria setaque simplici parva (fig. 6, *e*).

Articulus ultimus palpi maxillaris longitudinem latitudinem superante. Processus primus maxillae manducatorius in apice

aculeis duobus validis, laevibus. Pedes maxillares appendice branchiali 6 setosa, setis plumosis. Palpus pedis maxillaris dextri biarticulatus, articulo basali columniformi ubique fere aequilato, in angulo anteriore distali aculeis duobus diversis sensoriis; articulo ultimo fere falciformi, basi et in apice angustiore (fig. 6, *f*).

Palpus pedis maxillaris sinistri biarticulatus, articulo basali columniformi, ubique fere aequilato, in angulo anteriore distali aculeis duobus diversis; articulo ultimo fere falciformi, basi inflato, apicem versus sensim attenuato (fig. 6, *g*).

Pedes primi paris articulis duobus proximalibus superficie setosis, articulo antepenultimo in angulo anteriore distali setis duabus inaequalibus armato; ungue apicali longitudinem articulorum trium antecedentium superante.

Laminae furcales fere gladiiformes, margine posteriore vel superiore recto, dense setoso, setis minimis, margine anteriore vel inferiore sinuato; seta laterali unguiculo laterali valde approximated; unguiculo laterali longitudinem dimidiam unguiculi apicalis attingente; unguiculo apicali longitudinem dimidiam laminae furcalis multo non attingente; seta apicali longitudine dimidia unguiculis apicalis multo brevior (fig. 6, *h*).

Ductus ejaculatorius circum canalem centram annulis 20 aculeorum (fig. 6, *h*).

Penis utcunq; pyriformis appendice accessoria fere quadrangulari, apicem distalem versus dilatata. Vas deferens laqueos multos formans (fig. 6, *i*).

Specimina numerosa ♀ et ♂ examinavi e localitate *Mang-tsa* collecta.

Species haec nova in honorem D. F. H. *Stewarti*, denominata differt forma structurae concharum, ductus ejaculatorii penisque a speciebus ceteris generis.

(19) *Herpetocypris smaragdea*, n. sp.

(Fig. 7, *a-d*.)

Conchae ambae structura formaque similes, a latere visae fere reniformes, altitudine maxima dimidiam longitudinem attingente; margine anteriore, posteriore ventralique lamina hyalina, canalibusque pororum carentibus.

Margo anterior concharum fere altitudine posterioris, latiusculo arcuatus, in marginem dorsalem ventralemque sine limite visibili ineuns (fig. 7, *a*).

Margo dorsalis late arcuatus, antice posticeque flexuosus, in marginem posteriorem sine limite visibili ineuns.

Margo posterior acutiusculo rotundatus, in marginem ventralem sine limite visibili flexuose ineuns.

Margo ventralis in medio late sinuatus, ante et post sinum parum arcuatus.

Conchae supra aut infra visae elongato oviformes, antice acutius

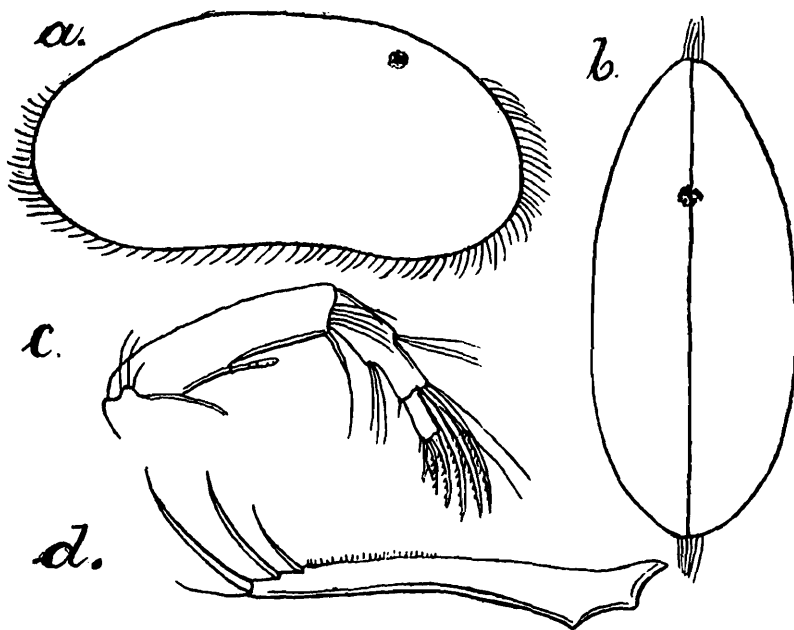
quam postice rotundatae, lateribus late arcuatis; latitudine maxima in medio sita (fig. 8, *b*).

Valvulae concharum politae, laeves; colore viridi.

Longitudo concharum 1.25 mm.; altitudo maxima 0.6 mm.; latitudo maxima 0.55 mm.

Articulus ultimus antennarum primi paris setis duabus longis aculeoque elongato, setiformi, laevi.

Articulus basalis endopoditi antennarum secundi paris fasciculo setarum 5 breviorum natatoriarum evanescente, dimidiam, longitudinem articuli sequentis parum attingene. Articulus penultimus in angulo superiore distali unguiculis 3 aequilongis, validis, denticulatis setisque duabus longis.



[FIG. 7.—*Herpetocypris smaragdea*, n. sp.

- (*a*) Concha dextra a latere visa.
 (*b*) Conchae supra visae.
 (*c*) Endopoditum antennae secundi paris.
 (*d*) Lamina furcalis.

Articulus ultimus in apice unguiculis duobus diversilongis, denticulatis, seta bifissa sensoria setaque parva simplici (fig. 7, *c*).

Palpus maxillaris articulo ultimo longiore quam latiore. Processus manducatorius primus in apice aculeis duobus laevibus, politis.

Palpus pedum maxillarium cuneiformis apice trisetoso, setis brevibus. Appendix branchialis setis 6 plumosis.

Pedes primi paris articulis duobus proximalibus in marginibus setosis. Articulus antepenultimus in angulo anteriore distali setis duabus inaequalibus. Unguis apicalis longitudinem articulorum trium antecedentium pedis superans, parum arcuatus.

Pedes secundi paris iisdem specierum ceterorum generis similes.

Laminae furcales apicem versus parum attenuatae, subrectae, margine posteriore setoso, setis minimis; seta laterali unguiculo

lateralis approximata, longitudinem dimidiam unguiculi lateralis superante; unguiculo laterali elongato, longitudinem dimidiam unguiculi apicalis multo superante; unguiculo apicali fere longitudine dimidia laminae furcalis; seta apicali longitudinem tertiam unguiculi apicalis non superante (fig. 7, *d*).

Specimen unicum ♀ examinavi e localitate *Rham-Tso*.

Species haec nova speciei *Herpetocypris stewarti* affinis, sed differt: forma structuraque concharum antennarumque secundi paris.

(20) *Potamocypris stewarti*, n. sp.

(Fig. 8, *a-c*.)

Conchae ambae structura formaque similes, a latere visae parum oviformes, altitudine maxima in medio concharum sita longitudinem dimidiam valde superante (fig. 8, *a*); margine anter-

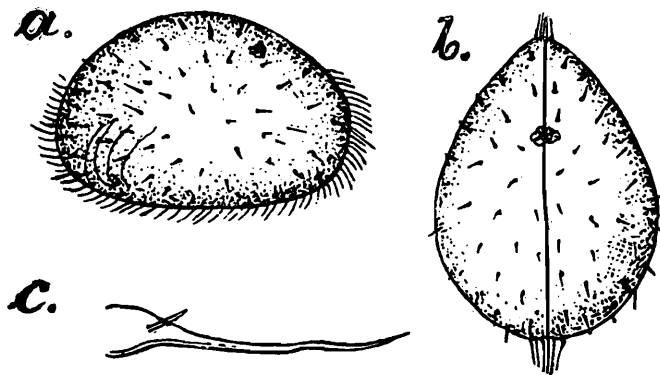


FIG. 8.—*Potamocypris stewarti*, n. sp.

- (*a*) Concha dextra a latere visa.
- (*b*) Conchae supra visae.
- (*c*) Lamina furcalis.

iore, posteriore ventralique lamina hyalina canalibusque pororum carentibus.

Margo anterior fere altitudine posterioris, obtuse arcuatus, in marginem dorsalem ventralemque sine limite visibili ineuns.

Margo dorsalis sat acute rotundatus, antice posticeque flexuose declinatus, in marginem posteriorem sine limite visibili ineuns.

Margo posterior acutiusculo arcuatus, marginem dorsalem versus flexuoso, marginem ventralem versus acutius rotundatus et in marginem ventralem sine limite visibili ineuns.

Margo ventralis leviter arcuatus, antice posticeque parum flexuosus (fig. 8, *a*).

Conchae supra aut infra visae ovo brevi, sat dilatato similes, apice anteriore acuto, posteriore vero sat obtuse rotundato, latitudine maxima post dimidium sita (fig. 8, *b*).

Valvulae concharum concinne granulatae, sparsim setosae, setis parvis; colore viridibrunneo.

Longitudo concharum 1 mm.; altitudo maxima 0.75 mm.; latitudo maxima 0.56 mm.

Exopoditum antennarum primi paris lobum parvum trisetosum formans seta mediana perlonga, apicem articuli ultimi fere attingente. Articulus primus endopoditi in parte distali infra setosus, fasciculo setarum natatoriarum apicem unguiculorum apicalium attingente. Articulus penultimus in angulo superiore distali unguiculis tribus apicalibus setisque duabus longis. Unguiculi apicales inter se diversi, duo aequilongi, tenue denticulati, alter brevior, parum latior, validiusque denticulatus. Articulus ultimus in apice unguiculis duobus inaequalibus denticulatis, seta sensoria bacilliformi, setaque parva simplici.

Processus manducatorius maxillarum primus aculeis duobus laevibus, politis.

Pedes maxillares solum setis duobus branchialibus.

Pedes primi secundique paris iisdem specierum ceterorum generis similes.

Laminae furcales evanidae seta laterali brevi, processu flagelliformi apicali (fig. 8, c).

Specimen unicum ♀ examinavi e localitate *Gyantse*.

Species haec nova in honorem D. F. H. *Stewarti*, denominata differt forma structuraque concharum a speciebus ceteris generis.

HYDRACHNIDAE.

(21) *Eulais tibetana*, n. sp.

(Fig. 9, a-e.)

Corpus ovale, antice acutius, postice latius rotundatum, longitudine 2-3 mm., latitudine maxima 1.5—2 mm.

Integumentum corporis dense concinneque striatum.

Circuitus oculorum oviformes, antice posticeque aequaliter rotundati ponte elongato conjuncti. Pons conjungens longitudine 0.17 mm. margine anteriore posterioreque trituberculato, tuberculo medio majore, duobus lateralibus minoribus aequalibus, lamina adhaesionis musculorum sat magna, rotundata, setis sensoriis e tuberculis exeuntibus (fig. 9, a).

Capitulum breviusculum superficie granulata, in angulo posteriore utrinque processu retrorsum et a latere vergente sensim attenuato; margine posteriore prope basin processorum lateralium tuberculo parvo (fig. 9, c).

Sacculi tracheales longitudinem pharyngis non superantes (fig. 9, b).

Pharynx postice in lateribus processu parvo dentiformi (fig. 9, c).

Palpus maxillaris longitudine 1.2 mm. Articulus secundus in margine inferiore prope angulum setis duabus, latere externo laevi, latere interno in margine apicali setis 4 brevibus, aculeiformibus, setosis (fig. 9, b, d). Articulus tertius in latere exteriori et in margine distali seta aculeiformi pilosa (fig. 9, b), in latere interiore et in margine apicali setis 4 aculeiformibus pilosis (fig. 9, d). Articulus quartus in margine superiore inferioreque

setis duabus simplicibus, in latere exteriori laevi (fig. 9, *b*), in latere interiore vero setis 11 simplicibus in seriebus duabus longitudinalibus ordinatis (fig. 9, *d*). Articulus ultimus apice denticulatus, denticulis parvis, numerosis, in latere exteriori laevi (fig. 9, *b*), in latere interiore vero setis duabus aculeiformibus, simplicibus (fig. 9, *d*).

Pedes unguiculo apicali bisso (fig. 9, *e*), longitudine diversi. Pedes primi paris 1.6 mm.; secundi paris 1.9 mm.; tertii paris 2.1 mm.; quarti paris 2.5 mm.

Specimina 4 examinavi e localitate *Gyantse*.

Species haec nova speciei *Eulais megalostoma* a D. F. Koenike

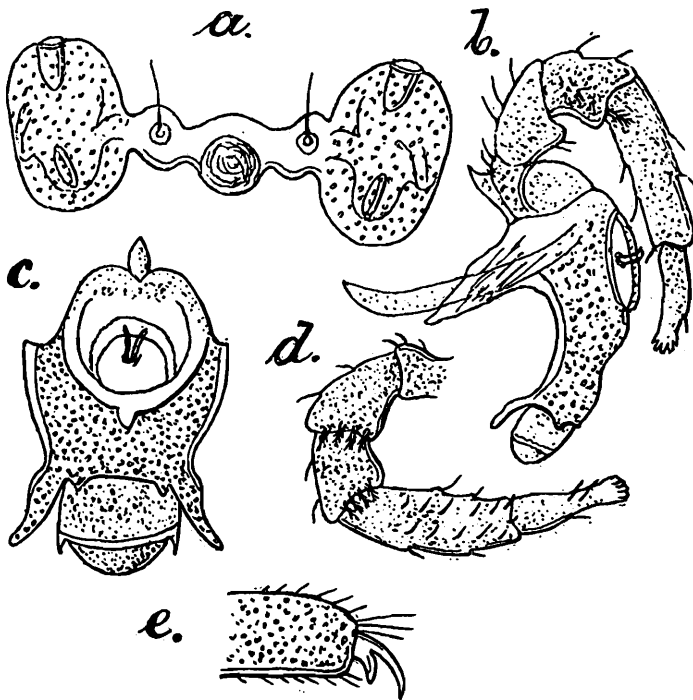


FIG. 9.—*Eulais tibetana*, n. sp.

- (a) Oculi.
 (b) Capitulum et palpus maxillaris a latere exteriori.
 (c) Capitulum a latere ventrali visum.
 (d) Palpus maxillaris a latere interiore.
 (e) Unguis pedum 1-4 paris.

ex Afrika orientali descriptae affinis, sed differt: structura circuitus oculorum, capituli palpique maxillaris.

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REPORT ON THE FISH COLLECTED IN TIBET
BY CAPT. F. H. STEWART, I.M.S.

By R. E. LLOYD, M.B., D.Sc., Capt., I.M.S.

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This collection includes eight species, all of which were taken from the Nyang Chu, a stream of some magnitude, which flows by Gyantse and Shigatse to meet the Tsang-po. Of these species three are new to science. During the expedition of 1904 Captain H. J. Walton collected seven species of fish, of which no less than six were found by Mr. Tate Regan to be new species. As only two species, *Nemachilus stoliczkæ* and *Schizothorax macropogon*, are present in both collections, we may conclude that the waters of Tibet contain a considerable variety of fish.

Nemachilus stoliczkæ, Day.

Numerous specimens.

Ptychobarbus conirostris, Steindachner.

One specimen 175 mm. in length.