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New Genera of Empididae (Diptera) from Eastern Asia

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In this paper I found the following new genera of the family Empididae from Eastern Asia. *Chillcottomyia* is closely related to the Afrotropical genus *Stenoproctus*, and it is rather widely distributed from Nepal to Japan through Taiwan and the Philippines. *Leptocyrtoma* is an aberrant genus of *Bicellaria*-group in having the dichoptic eyes and the narrow wings with much reduced axillary lobe. It is known only from the mountain region of Nepal Himalaya. *Stylocyrtomyia* belongs to the *Leptozeza*-group, but it is very unique in having the greatly lengthened 3rd antennal segment and style. *Thalassophorus* is a genus close to *Microphorella*, but it is the first empidid genus which, as the aphrosyline of Dolichopodidae, lives exclusively on the rocky sea-shore. At present it is known only from the type-species which occurs in a small island near Hokkaido. *Xanthodromia* is described from the mountain to subalpine regions of Japan. Its general habitus is somewhat similar to those of certain groups of Hemerodromiinae and Clinocerinae, but there are no close relatives in the two subfamilies. *Rhyacodromia* is only one of the specialized forms which were apparently derived from *Clinocera* of a wide sense. It is represented by the type-species here described from Japan and Nepalese *Clinocera evae* SMITH. *Ephydrempis* is apparently closely related to Palaeartic *Trichopeza* and Nearctic *Sabroskyella*, but it is much more adapted to the semiaquatic habitat in developing the *Clinocera*-like labella and apical structures of legs.

Before going further I would like to express my cordial thanks to Prof. Emerit. T. SHIRÔZU for his kind encouragement. My thanks are also much due to the following persons who collected the valuable specimens used in this paper: Prof. A. Nakaniishi and Prof. H. SHIMA, Kyushu University, Prof. J. EMOTO, Nanzan University, Mr. K. ÔHARA, Tokushima Prefectural Office, Dr. Y. NISHIDA, Osaka University and Mr. H. MAKIHARA, Forestry & Forest Products Research Institute, Tsukuba.

Chillcottomyia SAIGUSA, **gen. nov.**

Stenoproctus-like genus having slender hind femora and pilose compound eyes.

Head (Fig. 1) globose, slightly shorter than high. Compound eyes very large, more or less flattened above, touching each other for a long distance on frons, with upper facets conspicuously enlarged; compound eye densely covered with pile almost as long as diameter of facets. Occiput weakly swollen, clothed with scattering fine bristles and bearing a postocular ciliation of longish bristles on upper 1/4 and shorter setae on

lower portion; ocellar tubercle prominent, ocelli very large, a pair of long ocellar bristles and 2-3 shorter setae. Frons represented by a small triangle above antennal bases, face narrower than ocellar tubercle, narrowest at the middle, then gradually widening above and below. Antenna placed at ventral $2/5$ of head; 1st segment smaller than 2nd segment which is globose and bears a subapical circlet of setulae; 3rd segment about $2.5\times$ as long as 2 basal segments together, $3\times$ as long as thick, thickest at basal $1/4$, then evenly tapering to pointed tip, arista bristle-like, bare, $1.5\times$ as long as 3 antennal segments together. Proboscis horizontal as in the genus *Syneches* Walker, 1852, projecting forwards beyond frontal margin of head; palpus elongate, laterally compressed, slightly dilating apically, clothed with several longish setae, with its tip almost extending to subapical portion of proboscis.

Thorax slightly higher than long, mesonotum strongly humpbacked, pronotum rather well developed, prosternum separated from proepisternum by membranous area. Chaetotaxy: Pronotum, humerus, sides of mesonotum and postalar callus clothed with fine short setae; 1 strong notopleural, dorsocentrals uni- to biserial, short and fine except for a strong prescutellar bristle, acrostichals multiserial, short and fine, scutellum with many marginal setae including 1-2 pairs of strong subapical bristles.

Legs moderately slender and simple; femora slender, front and middle femora short-haired above, beneath with an anteroventral and a posteroventral ciliations of setae which are longer in posteroventral one; hind femur clothed with longish hairs above and an anteroventral row of shorter setae. Front tibia rather thick except for slender basal portion, its pubescence longer on dorsal side; middle tibia slender, short-haired, with 1-2 strong anterodorsal bristles and 2 preapical ventral bristles; hind tibia clothed with longish hairs mixed with several long bristles on dorsal surface. Tarsi simple, short-haired; ungues and pulvilli normally large, empodia bristle-like with ventral ciliation.

Wing moderately long and broad, axillary incision of 90° , axillary lobe well developed; venation as in *Stenoproctus*; C ending at tip of M_1 ; Sc with its apex shortened and approximating to R_1 , basal section of Rs very long; R_4 absent; basal cells subequal in length to each other, attaining to middle of wing; discal cell broad, M_2 absent, apical section of M_1 parallel to R_5 , apical section of M_3 shorter than distal margin of discal cell; anal cell short, almost $2/5$ as long as 2nd basal cell, vein closing anal cell almost perpendicular to posterior margin of 2nd basal cell, weakly curved outwardly, anal vein extending to wing margin or ending just before it.

Abdomen elongate and cylindrical, clothed with longish bristles; in ♂ 8th abdominal segment asymmetrically deformed by rotation of the genitalia, its sternum located rather dorsally. ♂ genitalia (Fig. 2): Moderately large and slenderer than 7th abdominal segment, rotated to right about 70° - 80° , similar to those of *Syneches* in basic structures, but somewhat asymmetrical; epandrium complete, its tergal lobes elongate and asymmetrical, bearing a row of scale-like bristles on dorsal margin; cercus slender, stylus-like, projecting dorsally (in rotated condition ventrally); aedeagus with strongly compressed carinate apex, parameres lamellate, acutely projecting apically, bearing a dorsal row of setulae; hypandrium deeply bifid into asymmetrical processes, of which right one is longer and bears a strong bristle at apex. ♀ terminalia: Apex of abdomen

gradually tapering to pointed tip which bears a pair of moderately slender simple pilose cerci.

Type-species: *Chillcottomyia septentrionalis* SAIGUSA sp. nov.

Remarks: *Chillcottomyia* closely resembles Afrotropical genus *Stenoproctus* LOEW, 1858 in every external characters including characteristic wing venation having a discal cell emitting two veins and short anal cell apically closed by vertical vein, but it is easily distinguished from the latter by the slender hind femur only clothed with longish setae on ventral surface, by the asymmetrical male genitalia having a ventral carina bidentate at apex and by the densely pilose compound eyes in both sexes. The new genus was first suggested by K. G. V. SMITH (1965) in his description of *Stenoproctus nepalensis* which was doubtfully referred to *Stenoproctus* based only on one female specimen. He also mentioned an African species having the slender hind femora, but it is uncertain whether the species is a member of the present new genus or not because the above-mentioned third character is not confirmed for it. The genus *Chillcottomyia* is now represented by the type-species, *C. nepalensis* (SMITH, 1965) (**comb. nov.**), an undescribed species from Taiwan, two undescribed species from Nepal and an undescribed species from Negros, the Philippines

The generic name is dedicated to the late Dr. J. G. CHILLCOTT.

***Chillcottomyia septentrionalis* SAIGUSA, sp. nov.**

♂. Head (Fig. 1) black, rather densely dusted with greyish brown pollen, cranial setae black; face dark grey. Antenna black, basal segments with brownish tinge, 3rd segment $3 \times$ as long as thick. Palpus black; proboscis brown with black tip.

Thorax: Mesonotum subshining black, dusted with greyish brown pollen which are denser at sides; humerus, postalar callus and anterior margin of scutellum brown to yellowish brown; pleura blackish brown, greyish brown pollinose. Chaetotaxy: Thoracic bristles and hairs all black, except for weaker brown hairs at sides of

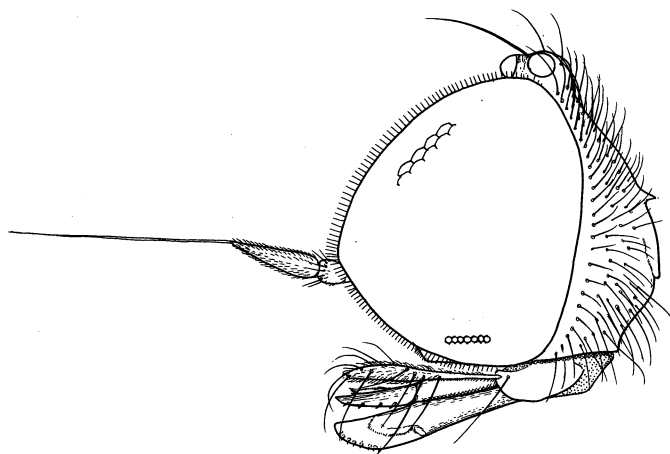


Fig. 1. *Chillcottomyia septentrionalis*, sp. nov., ♂ head, lateral aspect.

mesonotum; scutellum with a pair of outstanding bristles besides 13-15 shorter setae; postalar callus with 2-3 setae, one of which is somewhat stronger.

Legs yellowish brown, front coxa, apical 1/5 of hind femur and tibia, and the apical 3 tarsomeres brown to dark brown; pubescence and bristles of legs black to dark brown. Hind femur with a posterodorsal ciliation of erect longish setae on basal 1/2, 2-3 long anterior bristles on apical 1/2, and 2-3 long erect bristles ($3 \times$ as long as femur thickness) in anteroventral ciliation of setae. Middle tibia weakly curved ventrally beyond the middle, and with a strong anterodorsal bristle at basal 1/4; hind tibia with 4-5 long anteroventral setae, an anterodorsal bristle $1/4 \times$ as long as the tibia at basal 1/3, 3-4 long posterodorsal setae which are subequal to anterodorsal bristle in length but weaker.

Wing clear, veins dark brown; stigma oval and dark brown, slightly longer than $2 \times$ its width; discal cell broad, its posterior margin $2 \times$ as long as discal crossvein which is $1.5 - 2 \times$ as long as apical section of M_3 . Halter yellow.

Abdomen dark brown, thinly dusted brown, clothed with black setae. Genitalia (Fig. 2) dark brown; tergal lobe with yellow subpennate bristles; left tergal lobe with apex curved inwardly and bearing scale-like bristles; right tergal lobe with 2 curved dorsal bristles beyond the middle, bases of these bristles separated from each other for a distance more than $2 \times$ of basal thickness of bristles.

Length: Body 3.4-3.7 mm; wing 4.1-4.2 mm.

♀. Exactly answering the ♂ description except for the weaker setae and bristles on legs and posteriorly tapering abdomen with a pair of slender short cerci.

Length: Body 3.7 mm; wing 4.3 mm.

Type-locality: Nakamichi-bashi, Itsuki, Izumi Mura, Kumamoto, Kyushu, Japan.

Distribution: Japan (Honshu and Kyushu).

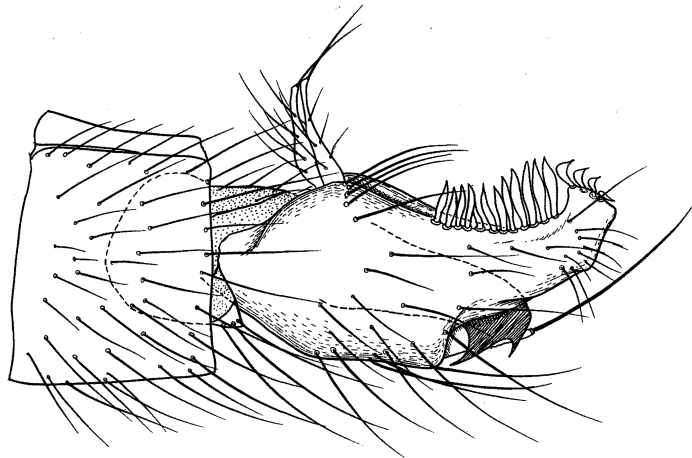


Fig. 2. *Chillcottomyia septentrionalis*, sp. nov., ♂ genitalia with 1 pregenital segment.

Holotype ♂, Nakamichi-bashi, 4.viii.1976, K. ÔHARA leg. (in my collection at Biological Laboratory, College of General Education, Kyushu University).

Paratypes: 1 ♀, same locality as holotype, 4.viii.1975, T. SAIGUSA leg.; 1 ♂, same locality as holotype, 28.vii.1977, K. ÔHARA leg.; 2 ♂♂, Nikengoya (790 m) near Osorakanzan, Hiroshima, Honshu, 16.viii.1976, at light, K. ÔHARA leg.; 1 ♂, Oirase, Aomori, Honshu, 2.viii.1979, at light, K. ÔHARA leg.

Remarks: *Chillcottomyia septentrionalis* is very closely related to *C. nepalensis* (SMITH, 1965) from Eastern Nepal in the single anterodorsal bristle of middle tibia, but may be distinguished from the latter by the black thoracic hairs and bristles. The undescribed species from Taiwan mentioned in remarks of the generic description is very much similar to *nepalensis* in every characters including pale thoracic pubescence, and may belong to *nepalensis*. In this Taiwan species the two dorsal bristles of the right tergal lobe are very much approximated to each other. The type-specimens are collected by sweeping herbages near mountain streams.

Leptocyrtoma SAIGUSA, gen. nov.

Superficially resembling genera of Hemerodromiinae, but the legs all simple and wing venation of *Bicellaria*-type.

Head (Fig. 3) almost globose in lateral aspect, but much compressed laterally, slightly shorter than high in profile, and $1.2 \times$ as long as wide; compound eye rather small, occupying anterior $1/2$ of head, widely separated on frons and face, with all facets subequal in size. Vertex much raised and well developed, ocellar tubercle prominent, with each pair of strong ocellar and of weak postocellar bristles; frons $1/5$ as wide as head, weakly tapered ventrally, without hairs; face narrow on upper $1/2$, almost as wide as anterior ocellus, and gradually dilating ventrally, free from hairs; occiput strongly developed and swollen, clothed with a postocular ciliation and scattered setae; gena broad. Antenna slightly shorter than head, 1st segment very small, almost fused with 2nd segment, which bears a few setae, 3rd segment $1.7 \times$ as long as basal 2 segments together, $2 \times$ as long as thick, its apical portion tapered into a short projection; style slightly shorter than 3rd segment, its basal segment $1/4$ as long as apical segment. Mouth parts similar to those of *Bicellaria*, vertical, $4/5$ as long as height of head; labrum stout basally, much tapered beyond the middle, with a pair of lateral brades bearing a few minute setulae; hypopharynx weakly curved posteriorly, labella small; pulpus small and oval, maxillary lacinia absent.

Thorax as long as thick, mesonotum moderately swollen, prothorax weakly developed; prosternum small, separated from episternum by membranous area. Chaetotaxy: No prothoracic, meso- and metapleural setae; no acrostichals, mesonotal bristles rather long, 5 dorsocentrals, of which posterior ones are usually longer, 2-3 short humeral, 1-2 intrahumeral, 1 long posthumeral, 1-2 anterior and 1 long posterior notopleural, 1 long supra-alar bristles. Legs long and slender, short-setulose; distance between front and middle coxae about $2 \times$ as long as that between the latter and hind one; femora clothed with minute white pile in addition to a double row of short setae; tibiae with 2-3 anterodorsal bristles; tarsi slender and simple, metatarsi slightly broader than thick; ungues, pulvilli and empodia normal and moderately large, the

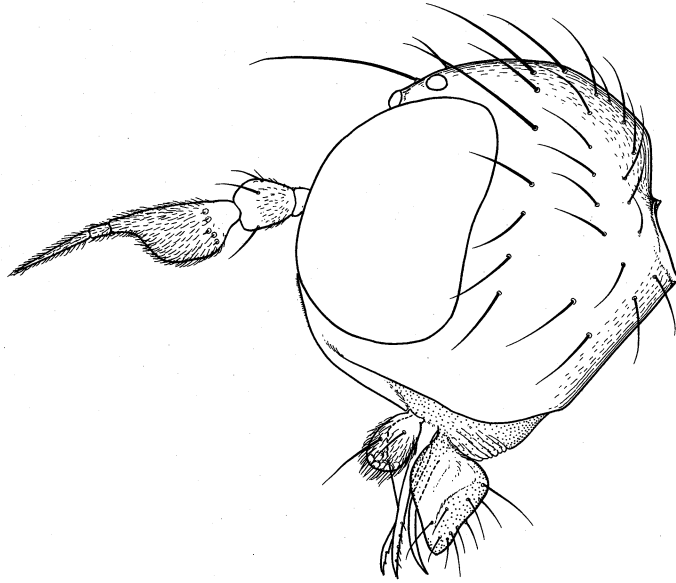


Fig. 3. *Leptocyrtoma shirozui*, sp. nov., ♂ head, lateral aspect.

latter bristle-like with several ventral ciliations.

Wing rather long and broad, axillary lobe weakly developed, costa almost ending beyond tip of R_{4+5} ; venation similar to in *Bicellaria*, but R_1 short, ending at basal 2/3 of costa, M_1 and M_2 very faint, their bases and apical portion of common stalk hardly traceable as a weak fold on wing membrane; 2nd basal cell as long as 1st basal cell but the cell often incompletely closed or even open; vein closing anal cell more acutely recurrent; stigma absent.

Abdomen elongate and cylindrical, short-haired and without special ornamentations. ♂ genitalia (Fig. 4) almost as thick as 8th abdominal segment, slightly rotated to right, structurally same as those of *Bicellaria* and *Syneches*; hypandrium with weakly convex apical margin, apex of epandrial lobes acutely pointed; ventral margin of paramere and phallic organ minutely serrate. ♀ terminalia evenly tapering to tip; 8th tergum and sternum completely separated from each other, the latter weakly convex on posterior portion, with slightly emarginate posterior margin; 9th segment slender, tergal and sternal elements separated from each other, cercus style-like, as long as 9th tergum, bearing a few short fine setulae.

Type-species: *Leptocyrtoma shirozui* SAIGUSA, sp. nov.

Remarks: *Leptocyrtoma* includes a slender-bodied delicate empidid with simple slender legs and in general appearance it is somewhat similar to *Hemerodromia* and allies, but it is apparently closely related to *Bicellaria* MACQUART, 1823 and *Hoplocyrtoma* MELANDER, 1928. The basic components of wing venation is quite same as those of the latter two genera, and the male genital structure and mouth parts also support this systematic position. The new genus is, however, easily separable from *Bicellaria*

and *Hoplocyrtoma* by the weakly developed axillary lobe of wing and elongate head with dichoptic eyes in both sexes.

The genus is represented by only the Himalayan type-species.

Leptocyrtoma shirozui SAIGUSA, sp. nov.

Yellowish species with vertex, mesonotal central stripe and abdomen dark brown.

♂. Head (Fig. 3) brown above and brown-bristled, yellowish white to yellow setose beneath, sparsely dusted with grey. Antenna yellow, dorsodistal corner of 3rd segment and style blackish; mouth parts and palpus yellow, tips of labrum and labella slightly darkened.

Thorax yellow, thinly dusted white; mesoscutum with a narrow central dark stripe throughout its length, scutellum infuscated, with pale distal margin; postnotum brown. Thoracic bristles and hairs yellow to yellowish brown. Legs yellow, subshining, clothed with brown setae; femur microscopically white pilose beneath, anterodorsal bristles of tibiae 2 × as long as thickness of tibiae; apical tarsomeres slightly infuscated.

Wing very weakly infuscated, veins yellowish except for apical portions of R_{2+3} and R_{4+5} , setae of costa brown. Halter yellow.

Abdomen dark brown, thinly dusted white, clothed with brown hairs. Genitalia with ventral margin of process of epandrium bearing 5-6 stiff setae; hypandrium

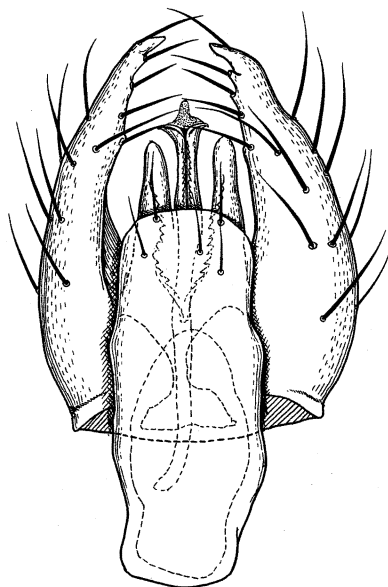


Fig. 4. *Leptocyrtoma shirozui*, sp. nov., ♂ genitalia, ventral aspect.

evenly and weakly rounded distally, with several setae near distal margin.

Length: Body 1.5-1.7 mm; wing 2.4-2.8 mm.

♀. Resembling ♂, but differing as follows. Head darker, 3rd antennal segment entirely dark brown. Lateral portion of mesonotum often much darkened, in the darkest specimens mesonotum dark brown with a pair of oval, yellow, lateral markings; pleura usually darkened on upper 1/2. Abdomen evenly tapered to tip which bears a pair of dark brown cerci.

Length: Body 1.6-2.3 mm; wing 2.6-3.4 mm.

Type-locality: Thudam (3,700 m) 27°45'N, 87°32'E, Eastern Nepal.

Distribution: Eastern Nepal.

Holotype ♂, Thudam, 30.vi.1972, J. EMOTO leg. (in the Nepalese Insect Collection in Biological Laboratory, College of General Education, Kyushu University).

Paratypes: 8♀♀, same data as holotype; 1♂7♀♀, same data as holotype except collector, H. SHIMA leg.; 7♀♀, same locality and collector, 24.vi.1972.; 1♂, NE of Thudam (4,000 m) 27°47'N, 87°36'E, 25.vi.1972, H. SHIMA leg.; 1♂, same locality, 25.vi.1972, Malaise's trap; 2♀♀, same locality, 25.vi.1972, Y. NISHIDA leg.; 3♀♀, same locality, 28.vi.1972, J. EMOTO leg.; 1♀, Thudam-Tanga La (4,700 m) 27°40'N, 87°36'E, 5.vii.1972, Y. NISHIDA leg.; 1♂, Penmaten (2,600 m) 27°36'N, 87°36'E- Topke Gola (3,700 m) 27°38'N, 87°35'E, 30.vi.1972, H. MAKIHARA leg.

Stylocydromia SAIGUSA, gen. nov.

Ocydromia-like genus with greatly lengthened 3rd antennal segment and pilose, weakly developed axillary lobe of wings, and pointed ♀ terminalia with slender cerci.

♀. Head seeming to be globose; compound eyes very large, occupying most of head, touching each other on frons and face except around antennal bases, with facets subequal in size. Ocellar tubercle weakly raised, with a pair of fine longish ocellar setae; occiput very weakly developed, frons and face almost absent except near antennal bases. Antenna placed at middle of anterior margin of head, greatly lengthened, 3 basal antennal segments $1.5 \times$ as long as head, whole antenna including style nearly $4 \times$ as long as head; 2 basal segments subequal in length, slightly longer than thick, 2nd segment with scattered short setulae on apical 1/2; 3rd segment more than $3 \times$ as long as 2 basal segments together or $9 \times$ as long as its thickness in dried condition, densely covered with minute pile, and its apical 1/4 gradually tapering towards tip; style very long, $1.5 \times$ as long as 3 antennal segments together, almost as thick as subapical portion of 3rd segment, evenly tapered to apical bristle-like portion which is bare and slightly shorter than 1/10 of whole length of style, style densely clothed with white pile. Palpus small, apical portion bearing a fine seta seen from the ventral margin of shrivelled head; proboscis also short, labella clothed with fine hairs.

Thorax almost as long as thick; pronotum little developed, mesoscutum moderately arched. Chaetotaxy: Pronotum with a short fine hair at each side, proepisternum with 1-2 hairs; acrostichals absent, dorsocentrals uniserial, short and fine; a humeral, a posthumeral, a notopleural, 1-2 postalar setae all short and fine; scutellum with several fine scutellar setae. Legs long and slender, sparsely clothed with long subrect setae, without strong bristles and spines. Ungues and pulvilli normally large,

empodia bristle-like, with ventral ciliation.

Wing cuneiform, with axillary lobe undeveloped, venation similar to *Oropezella sphenoptera* (LOEW, 1873); costa ending slightly beyond tip of R_5 , Sc long but incomplete at tip; R_s long, arising much near to humeral crossvein than to r-m crossvein, R_5 absent; discal cell long, emitting 2 veins, M_1 absent; basal cells subequal in length; anal cell slightly shorter than 2nd basal cell, vein closing anal cell somewhat recurrent, almost in a line with m-cu crossvein; anal vein with its apex almost disappearing.

Abdomen elongate, cylindrical, curved ventrally in the type female of the type-species, with 3rd to 5th segments large, viewed from above widest at 4th segment, tapering to pointed apical segment which bears a pair of slender cerci.

Type-species: *Stylocydromia annulata* SAIGUSA, sp. nov.

Remarks: The new genus *Stylocydromia* most closely resembles *Ocydromia* MEIGEN, 1820 in the strongly developed compound eyes contiguous both on frons and face. It also shows some resemblance to *Oropezella*-group in the cuneate wings without prominent axillary lobe. But it can be easily separable from any genera of *Leptozeza*-group by the greatly lengthened 3rd antennal segment and style, and by the absence of acrostichals.

***Stylocydromia annulata* SAIGUSA, sp. nov.**

♀. Head black, occiput densely dark brown pollinose, clothed with fine short black setae arranged in a postocular ciliation and scattering on upper 1/2 of occiput; several fine, though yellowish setae on ventral 1/2 of occiput. Antenna black, black-setose and pilose, style black and black pilose on basal 1/4 and white and white pilose on apical 3/4. Palpus and proboscis yellow.

Thorax dark brown, prothorax, mesothorax anterior to the level of prothoracic spiracle, and around yellow postalar callus, prescutellar depression, and scutellum dark reddish brown; posterior portion of mesopleuron and upper part of sternopleuron with a reddish tinge. Mesonotum with a broad, sparsely greyish pollinose stripe extending from its anterior submargin to scutellum; supra-alar and postalar areas also white pollinose; pleuron sparsely greyish pollinose except for a large polished oval area including posterior 1/2 of mesopleuron, dorsal 1/2 of sternopleuron and most part of pteropleuron. Thoracic setae brown to yellowish brown.

Legs yellow; coxae sparsely white pollinose, other parts shining. Legs entirely and sparsely clothed with yellow to pale brown setae. Wing faintly greyish, infuscated at apical portions of basal and anal cells. Halter yellow, with apical 1/2 of shaft brown.

Abdomen shining dark brown, anterior 1/2 of 3rd and 4th segments, 5th and 6th segments excluding posterior margin, and apical segment including cerci yellow. Abdomen sparsely yellow setose.

Length: Body 3.1 mm; wing 3.0 mm.

Type-locality: Ulogomback Road, 30 km east of Kuala Lumpur, Malay Peninsula.

Distribution: Malay Peninsula.

Holotype ♀, Ulogomback Road, 30.x.1975, H. SHIMA leg. (in the collection of National Science Museum, Tokyo).

Thalassophorus SAIGUSA, **gen. nov.**

Microphorus-like genus superficially much resembling aphrosyline dolichopodids, having sucker-like mouth parts with flattened palpi, short labrum and rather fleshy labella, a pair of strong orbital bristles at middle of frons, slender legs, cuneiform wings furnished with 3-4 strong upright bristles on basal portion of costa.

Head (Fig. 5) slightly higher than long, viewed from in front or side, much constricted towards jowl-like peristomal region. Compound eyes widely separated from each other on frons, narrowly so on face, clothed with short pile, and with anteroventral facets somewhat enlarged. Vertex broad; ocellar tubercle prominent; frons 1/3 as long as head at the level of anterior ocellus, much narrowed ventrally, almost 1/5 of head width at the level of antennal bases; face narrowest at the middle, there its width subequal to or narrower than diameter of anterior ocellus; small, rather laterally compressed clypeus projecting forwards; occiput weakly convex, gena 1/7 as deep as vertical diameter of eye. A pair of ocellar bristles with a few short setulae, a pair of strong orbital bristles between anterior ocellus and antennal bases, a very strong inner vertical bristle, a strong outer vertical followed by a postocular ciliation. Antenna slightly shorter than $1.5 \times$ head length, 1st and 2nd segments subequal in length, the former tubular and bare, the latter globular, clothed with a circlet of setulae including a prominent dorsal one; 3rd segment microscopically pillose, $1.5 \times$ as long

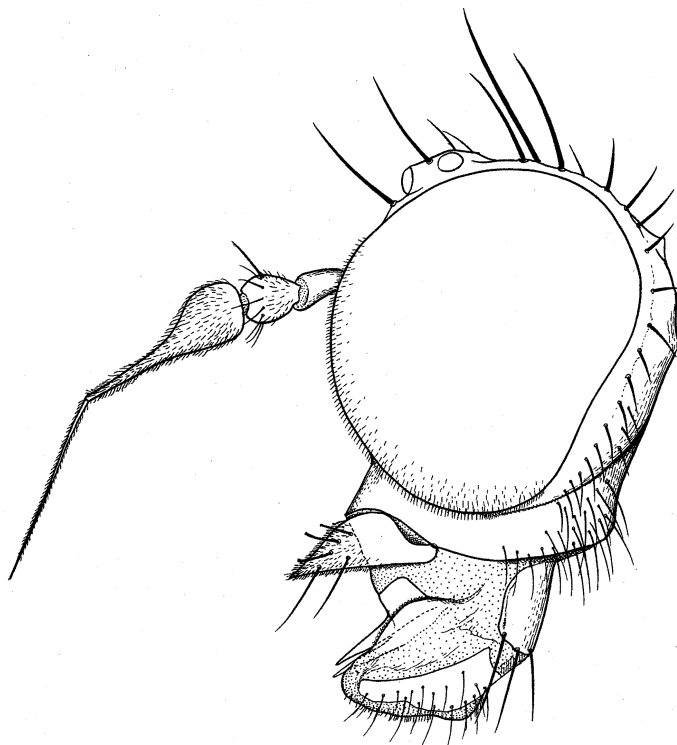


Fig. 5. *Thalassophorus spinipennis*, sp. nov., ♀ head, lateral aspect.

as 2 basal segments together, thick and conical on basal 1/2, much tapered towards tip, arista unjointed (consisting of 1 segment), slightly longer than 3rd segment, microscopically pilose. Mouth parts generally resembling dolichopodid ones; palpus lamellate, narrow at base, much dilated beyond basal 1/3, convex on dorsal margin, then tapered to pointed tip, clothed with minute pile and a few setulae, the palpi applied to each other in front of proboscis and projecting forwards along oral margin; proboscis about 2/5 as long as head height; labrum much short and broad, with a pair of piercing blades projecting forwards, hypopharynx well developed; labella of somewhat fleshy sucker-type, mentum with a few strong marginal setae.

Thorax as long as thick; pronotum very short, mesonotum moderately arched, distance between front and middle coxae $2 \times$ as long as that between the latter and hind coxae; prosternum fused with its episternum. Chaetotaxy: No acrostichals except for a pair of setulae on extreme front of mesonotum, 4 strong dorsocentrals with a few much weak setulae, 0-1 minute humeral setula, a strong posthumeral, 1 weaker anterior and 1 strong posterior notopleural, 1-2 weak supra-alar, a postalar, 2 scutellar bristles; 1-3 setulae often scattering on intrahumeral area; proepisternum with a few hairs.

Legs long and slender, short setose, femora clothed with erect hairs beneath, front and middle femora somewhat thickened basally, the former with a posteroventral row of fine setae, the latter with several strong anterior bristles on apical 1/3; tibiae and tarsi slender, simple, short-haired; ♂ front tarsus minutely pilose beneath; 5th tarsomere normal, unguis and pulvilli subequal in length, empodia bristle-like with a ventral ciliation.

Wing long and cuneiform, axillary lobe undeveloped; costa continued round to wing base as "ambient" vein, armed with strong spine-like bristles upright on wing surface in addition to the usual basal seta, each at tip of Sc, slightly proximad of tip of Sc, at humeral crossvein, and at slightly proximad of humeral crossvein; Sc short, with rather faint tip ending in costa, tip of R_1 distad the level of discal crossvein; R_{4+5} simple, basal cells very short, discal cell long, pointed apically, emitting 3 veins; anal cell slightly shorter than 2nd basal cell, roundly closed, with a very faint stump of anal vein.

Abdomen (Fig. 6) rather short; basic structures of male postabdomen and genitalia similar to those in *Microphorus* and its allies.

Type-species: *Thalassophorus spinipennis* SAIGUSA, sp. nov.

Remarks: *Thalassophorus* has very short basal cells of the wings and belongs undoubtedly to the *Microphorus*-group (Microphoridae of CHVÁLA). In this group, *Microphorella* BECKER, 1908 resembles *Thalassophorus* in the cuneiform wing and dichoptic, pilose eyes in both sexes, but the new genus is distinct from *Microphorella* in having well developed jowl (gena) below eyes, the lamellate palpi, sucker-type mouth parts, and spiniferous costa of wings. *Parathalassius* MIK, 1891 has the simple unsegmented antennal style and fused prosternum with episternum as in *Thalassophorus*, but the former genus has the angulately closed anal cell and simple costa of the wings, and unspecialized short labrum of the mouth parts.

Thalassophorus consists of a marine shore empidid living on wet stones on rocky or stony beach, the habitats of the aphrosyline dolichopodids, to which this empidid is

very similar in superficial appearance. *Parathalassius* is also a marine shore genus, but it lives exclusively on the wet sandy beach.

***Thalassophorus spinipennis* SAIGUSA, sp. nov.**

♂. Head (Fig. 5) black, densely dark grey pollinose, pollinosity of face and palpus lighter in colour. Orbital, ocellar and vertical bristles black, postocular setae brown on dorsal 1/3 of head, yellow on ventral 2/3, hairs scattering on posteroventral portion of cranium yellow. Antenna black, black setose and white pillose.

Thorax densely dark grey pollinose; mesonotum with a slight brownish tinge, when viewed from above a pair of dark subshining stripes appearing between rows of dorsocentral bristles, these stripes narrowing and approximating to each other towards anterior border of indistinct prescutellar depression. Second and 4th dorsocentral bristles somewhat stronger than others. Legs dark brown, dusted with greyish brown pollen, black setose except for coxa and femora which are pale setose beneath, front and middle femora thickened basally, tapering to tip, hind femur little compressed laterally, a few anterodorsal setae longish.

Wing slightly infuscate, bluntly rounded apically; usual basal bristle of costa shorter than the basal upright bristle. Veins brown, R_{2+3} strongly bisinuate, almost parallel to R_1 for basal 1/3, then converging to R_{4+5} and almost parallel to the latter for apical 1/3, apical portions of these veins weakly curved forwards. Halter brown. Abdomen black, rather densely dark grey pollinose, black setose, fine hairs of pregenital segment yellow. Genitalia in dried condition as illustrated (Fig. 6).

Length: Body 1.8-2.1 mm; wing 3.1-3.4 mm.

♀. Resembling ♂, but differing in the following points. Wing normally produced

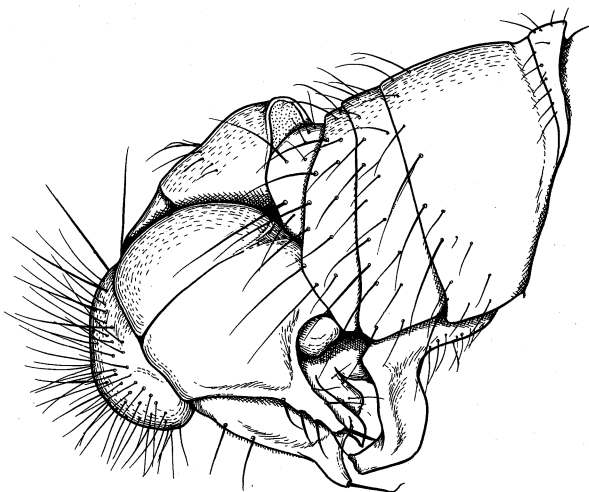


Fig. 6. *Thalassophorus spinipennis*, sp. nov., ♂ abdomen, lateral (right) aspect.

at apex, vein R_{2+3} more weakly sinuate than in ♂. Abdomen with 1st to 6th segments dark grey pollinose, apical segments small and subshining black with several yellow bristles.

Length: Body 1.9-2.3 mm; wing 3.2-3.4 mm.

Type-locality: Oshidomari, Rishiri Island, north of Hokkaido, Japan.

Distribution: Japan (Rishiri Island).

Holotype ♂, Oshidomari, 3.vii.1967, T. SAIGUSA leg. (in my collection at Biological Laboratory, College of General Education, Kyushu University).

Paratypes: 9 ♀ ♀, same data except 2. vii; 1 ♂ 8 ♀ ♀, same data as holotype.

***Xanthodromia*: SAIGUSA, gen. nov.**

Hemerodromia-like genus including slender-bodied, yellow empidids having plain front legs, weakly raptorial middle legs and cuneiform wings.

Head (Fig. 7) spherical, somewhat elongate; compound eye small, oval, bare, widely separated on frons and face, and with all facets almost equal in size. Frons slightly narrower than $1/3$ of head width, $1.5 \times$ as long as wide, slightly narrowing forwards, bare; face short, broad, slightly dilating above and beneath and bare; vertex much convex, ocellar tubercle weakly raised. Ocellar bristle prominent, postoculars not much differentiated from scattering vertical and occipital setae; inner and outer verticals strong, but continuing to postocular ciliation; occiput much convex and more or less elongate. Antenna about $2/3$ as long as head; 1st segment very small, 2nd segment globular, both clothed with minute apical setulae; 3rd segment $2 \times$ as long as 2nd, long oval, weakly pointing apically; style $1.5 \times$ as long as 3rd, microscopically pubescent, with basal segment rather thick, longer than thick, apical segment long. Palpus vertical, oblong, about $1/2$ as long as proboscis, clothed with several setae. Proboscis slightly shorter than $1/2$ of head height, curved towards front coxa; labrum weakly convex in front; hypopharynx strong, distinctly curved posteriorly, with sharply pointed black tip which is often protruded from labella in dried specimens; labellum also curved towards front coxa, with its apical margin obliquely vertical as illustrated.

Thorax as long as deep; pronotum moderately developed, but not so much differentiated as in *Chelifera* MACQUART, 1823; humerus distinct, prosternum broadly fused with proepisternum; distance between front and middle coxae less than $2 \times$ of that between the latter and hind one. Chaetotaxy: Pronotum with a transverse ciliation of a few hairs, of which each lateral one is strong; prothoracic episternum with 2-3 fine hairs; acrostichals absent, uniserial dorsocentrals of 2-3 strong bristles and several short setae; a humeral, a notopleural, a supra-alar and a postalar bristles all strong; scutellum with each pair of weak outer and strong inner bristles; a few scattering setulae on notopleural depression.

Legs long, rather slender, and short-haired; middle pair weakly differentiated into raptorial legs. Front coxa shorter than $1.5 \times$ middle coxa; front and middle femora somewhat thickened, clothed beneath with erect, fine, white pile, the former with a double row of ventral ciliation of fine setae, the latter armed beneath with an anteroventral and a posteroventral rows of bristles and many scattering short bristles between the rows, but the raptorial construction of middle femur not so much distinct-

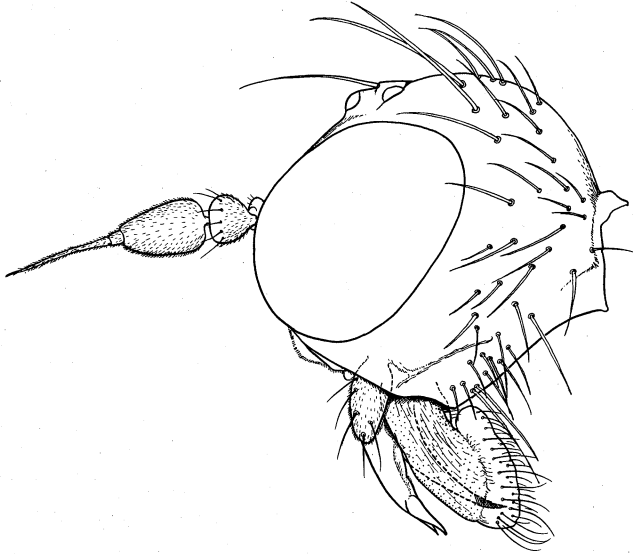


Fig. 7. *Xanthodromia tenuicaudata*, sp. nov., ♂ head, lateral aspect.

ly differentiated as in *Platypalpus* species; hind femur slender and simple, clothed with longish setae. Front tibia simple and short-haired; middle tibia short-haired above, beneath with many suberect setae each arising from a minute weakly raised point, ventrodistal end of the tibia produced; hind tibia slender, straight and simple. Tarsi slender and simple, 5th tarsomeres somewhat flattened; ungues and pulvilli normally large, empodia bristle-like with fine ventral hairs; front and middle tarsi clothed beneath with white pile.

Wing cuneiform, axillary lobe only slightly developed. Costa continued as an "ambient" vein round to base of wing; Sc ending in costa opposite end of 1st basal cell; R_4 absent; discal cell present, pointed apically, bases of M_1 and M_2 approximated, often arising from a point or short stalk; 2nd basal cell almost as long as 1st basal cell; anal cell slightly shorter than 2nd basal cell; Cu closing anal cell only slightly curved, almost upright; anal vein almost obsolete, represented by a very faint fold on wing membrane.

Abdomen tubular, only short-haired, without special ornamentations. ♂ genitalia (Fig. 8) moderately large, terminal; cercus broad at base with the elongate apical portion which is clothed with hairs; tergal lobe well developed, separated from cercus by a narrow membranous area, constricted and pilose on apical 1/3, with a curved process from apical 1/3 of its ventral margin; ventral lamella well developed and tubular, bifurcated into a dorsal and a ventral projections, from the former of which aedeagus is protruded; aedeagus consisting of stout basal portion which is much inflated apically, and an asymmetrically sinuate, whip-like, apical portion. ♀ terminalia unspecialized, 8th tergum normally large, its sternum weakly producing posteriorly; 9th segment small and membranous, cercus small, oval and short-haired; spermatheca tubular, more or less straight in its basal 1/2, then variously coiled and

sclerotized on its apical portion.

Type-species: *Xanthodromia tenuicaudata* SAIGUSA, sp. nov.

Remarks: *Xanthodromia* resembles *Hemerodromia* MEIGEN, 1822 and its allies in the elongate head with curved proboscis, but it is quite different from them in the raptorial ornamentations of middle, instead of front, legs. It also resembles European *Dryodromia* RONDANI, 1856, but in this genus the legs are all normal and the wing has vein R_4 . The new genus is represented by a group of several allopatric species in Japan in addition to the type-species, they are found on the blossom of *Acer* spp. in the mountain to subalpine regions.

***Xanthodromia tenuicaudata* SAIGUSA, sp. nov.**

♂. Body and legs entirely pale yellow, the former thinly dusted white, the latter shining; bristles and hairs all yellow. Ocellar tubercle darkened, eyes, apical 1/2 of unguis, apex of ventral process of tergal lobe of genitalia black; wing faintly yellowish with yellow veins. ♂ genitalia (Fig. 8): Ventral process of tergal lobe with a weak dentation near middle; ventral projection of ventral lamella separated into a broad anterior lamella and a short apically rounded posterior process; basal portion of aedeagus short, yellow, apical portion very slender and with pointed apex in dried specimens.

Length: Body 2.6-3.0 mm; wing 3.6-4.0 mm.

♀. Resembling ♂ except for terminalia. Spermatheca with basal membranous portion almost straight, apical sclerotized portion regularly coiled 3 times.

Length: Body 2.8-3.2 mm; wing 4.2-4.5 mm.

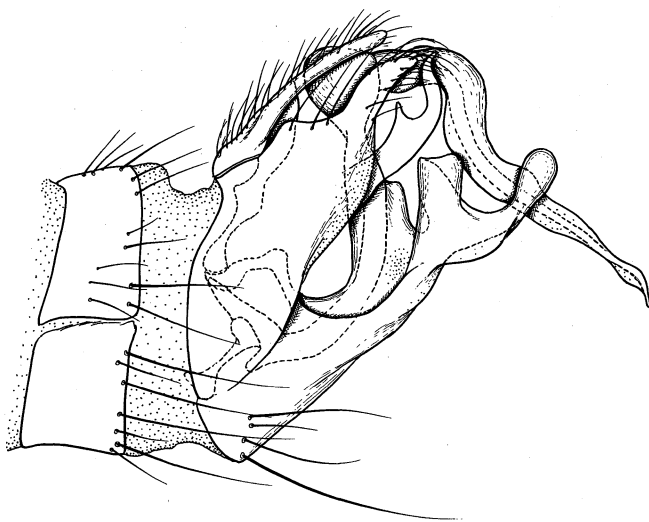


Fig. 8. *Xanthodromia tenuicaudata*, sp. nov., ♂ genitalia with 1 pregenital segment, lateral aspect.

Type-locality: Karasawa (2,400-2,600 m), Mt. Hodakadake, Hida range, Nagano, Honshu, Japan.

Distribution: Japan (Hida range of Honshu).

Holotype ♂, Karasawa, 10.vii.1963, T. SAIGUSA leg. (in my collection at Biological Laboratory, College of General Education, Kyushu University).

Paratypes: 10♂♂ 8♀♀, same data as holotype.

***Rhyacodromia* SAIGUSA, gen. nov.**

Clinocerine genus with short R_4 strongly divergent apically from R_5 and upcurved ventral lamella and thick aedeagus in male genitalia.

Head globular, slightly shorter than high. Compound eye spherical, widely separated on frons and face, densely clothed with minute pile; frons broad, weakly narrowed anteriorly, $2 \times$ as broad as long at the level of antennal base; face slightly narrower than frons, widened above and below; frons and face bare; ocellar tubercle prominent, vertex more or less raised; gena narrow, separated from face at lower margin of eye; a pair of strong divergent ocellar bristles; a strong vertical bristles followed by a postocular ciliation of 3-4 black bristles on upper 1/2 of head and weaker yellow hairs on ventral 1/2; 2-3 pairs of postverticals; occiput clothed with scattered pale hairs. Antenna with 2 basal segments short, apically pilose 3rd segment compressed, short conical, with a rather stout long arista. Mouth parts quite as in *Clinocera*; labrum and clypeus short, labella fleshy, palpus clavate, and weakly curved ventrally.

Thorax much longer than thick; prothorax well developed, prosternum fused with proepisternum, distance between front and middle coxae $2 \times$ as long as that between the latter and hind coxa. Chaetotaxy: Pronotum with a few hairs, proepisternum hairy; acrostichals absent, 5 dorsocentrals, a humeral, a posthumeral, a notopleural, a postalar, 2 scutellar bristles strong; humerus and notopleural depression with 1-3 fine hairs; metapleura clothed with fine hairs. Legs long and slender; front femur thick, armed beneath with an anteroventral and a posteroventral rows of short, thick thorns, the latter row replaced by a long bristles on basal 1/2, 4-5 subequal setulae on anterior surface. Front tibia beneath with suberect setulae in male, black points on basal 1/2 in female; middle and hind tibiae only short-haired. Tarsi slender and short-haired; 5th tarsomeres dorsodistally produced into a short projection, pulvilli 1/2 as long as ungues, empodia pulvilliform, longer than pulvilli.

Wing narrow, axillary lobe of wing not developed; venation similar to *Clinocera*, but R_{4+5} strong, R_4 short, strongly divergent from R_5 , so that tip of R_4 ending in costa just at the middle of tips of R_{2+3} and R_5 ; discal cell more or less pointed.

Abdomen tubular but rather short. In ♂, 7th and 8th segments (Fig. 9) so strongly curved dorsally that morphologically ventral margin of ventral lamella of genitalia quite turns to be dorsal; 6th and 7th terga with a pair of subdorsal tubercles, 8th terga reduced to a pair of widely separated cercus-like projections which are long-haired above. ♂ genitalia peculiar, ventral lamella rather small for Clinocerinae, strongly upcurved and tapered apically, and ending in a pointed slender process; aedeagus not articulated with tip of ventral lamella so common in *Clinocera* and its allies, but

attached for a considerable distance on middle portion of dorsal margin of ventral lamella; aedeagus of peculiar shape, rather short and considerably stout, broadly blunt-ended, and furnished with a slender curved whip from subapical portion of its posterior margin, this apical whip-like portion not articulated with basal portion but continuously sclerotized with it; tergal lobe moderately large, with a large lamellate apical process; subanal process long and pointed. ♀ terminalia basically quite as in *Clinocera*.

Type-species: *Rhyacodromia flavicoxa* SAIGUSA, sp. nov.

Remarks: *Rhyacodromia* is a member of a group consisting of *Clinocera* MEIGEN, 1803 and its allies and most closely related to the genus *Clinocera* in the structures of head, thorax and legs, but the new genus is strongly specialized in the male genitalia including pregenital terga and wing venation. The ventral lamella of the genitalia in *Clinocera* is a long conical structure, from the tip of which the aedeagus arises and a distinct articulation is formed between the two structures. The aedeagi of *Clinocera* are also slender tube without bluntly inflated sclerotized tip. In *Clinocera* the 3 pregenital abdominal terga of male are complete and simple, the 8th tergum is represented by a narrow transverse sclerite connecting each side of sternum. The short vein R_4 of wings of the new genus is also peculiar to the clinocerines, this vein, when present, is almost always long and parallel with R_5 , as in the genus *Hilara* of the Empidinae, while in the new genus venation of this portion is *Empis*-type. The taxonomical status of *Rhyacodromia* is somewhat problematical, but following to recent tendency treating *Kowarzia* MIK, 1881 as generic status, the above-mentioned characters of *Rhyacodromia* seem to be quite generic.

The new genus contains the type-species and *Rhyacodromia evae* (SMITH, 1965), **comb. nov.** described as *Clinocera* from Eastern Nepal Himalaya.

***Rhyacodromia flavicoxa* SAIGUSA, sp. nov.**

Small-sized species with yellow front coxae and bluntly ended apical processes of tergal lobe of ♂ genitalia.

♂. Head dark brown, densely dusted greyish brown, occiput brownish grey, face silvery white; vertical and ocellar bristles black; occipital bristles and hairs yellow. Antenna black, palpus dark brown.

Thorax dark brown, terga densely dusted brown with a slight reddish tinge; viewed from above mesonotum with faint dark median stripe, posthumeral area and base of posteriormost prescutural dorsocentral bristle dark; pleura whitish grey. Mesonotal bristle black, other setae and hairs yellow. Legs dark brown, dusted grey, trochanters and front coxa yellow, middle and hind coxae tawny; legs clothed with short black hairs; coxal setae yellow; front femur at middle $2\times$ as thick as its base, tapered apically, armed beneath with an anteroventral row of about 10 short, black thorns which become denser and shorter apically, a posteroventral row of several smaller thorns on apical $1/4$ and long yellow bristles on basal $3/4$; middle and hind femora slender and short-haired; front tibia beneath with suberect hairs, which become thicker and spine-like towards tip.

Wing distinctly tinged with brownish, stigma very faint, veins dark brown. Halter

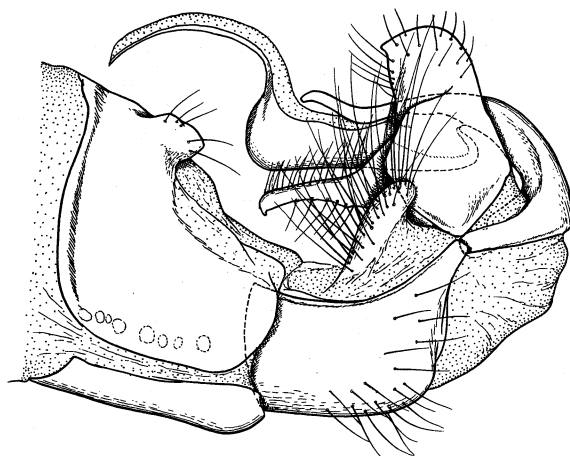


Fig. 9. *Rhyacodromia flavicoxa*, sp. nov., ♂ genitalia with 2 pregenital segments, lateral aspect.

brown, basal 1/2 of shaft yellowish.

Abdomen dark brown, dusted brownish grey on disc of terga, other portions greyish pollinose; hairs on dark pollinose area black, those on pale area yellow. Genitalia (Fig. 9): Apical process of tergal lobe bluntly ended; subanal process much slender, with a ciliation of long setae on each margin.

Length: Body 2.3-2.8 mm; wing 3.1-3.4 mm.

♀. Resembling ♂; front femur with ventral thorns and bristles weaker, anteroventral thorns almost confined to apical 2/3.

Length: Body 2.4-3.4 mm; wing 3.0-3.6 mm.

Type-locality: Mt. Tachibanayama, Fukuoka City, Fukuoka, Kyushu, Japan.

Distribution: Japan (Kyushu).

Holotype ♂, Tachibanayama, 14.iv.1962, T. SAIGUSA leg. (in my collection at Biological Laboratory, College of General Education, Kyushu University).

Paratypes: 24♂♂37♀♀, same data as holotype.

Remarks: The new species much resembles only the known species, *Rhyacodromia evae* (SMITH, 1965) from Eastern Nepal, but the Himalayan species has the wholly dark brown legs and the illustration of its ♂ genitalia in the original description shows that apical process of tergal lobe is distinctly tapered towards tip and the subanal process much broader. The new species is found on wet stones in streams and it seems to be one of the commonest species of clinocerines in Japan.

Ephydrempis SAIGUSA, gen. nov.

Clinocera-like genus having appearance of *Trichopeza* or *Proagomyia*, but abundantly different from them in important morphological characters. Most closely related to *Sabroskyella*. Only the type-species is known from Nepal Himalaya.

Head (Fig. 10) spherical, almost as long as high; vertex broad, ocellar tubercle

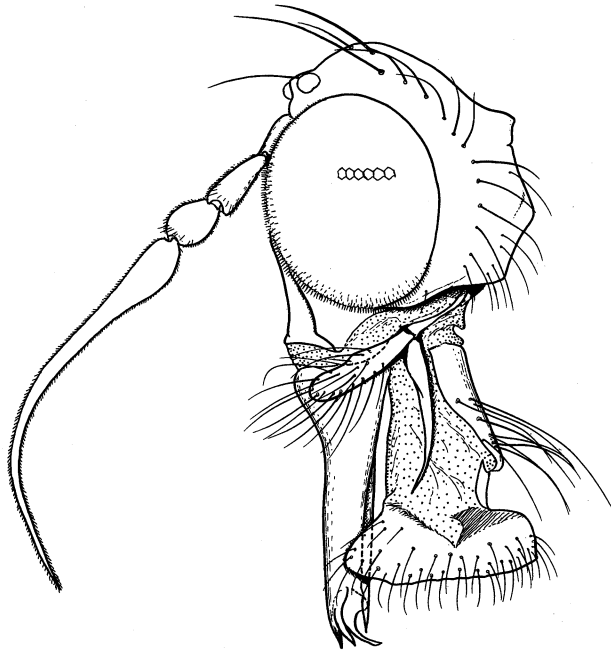


Fig. 10. *Ephydrempis setiventris*, sp. nov., ♂ head, lateral aspect.

rather shifted forwards; frons broad, shorter than wide, nearly $1/3$ as wide as head; face also broad, gradually dilating ventrally; face and frons bare; gena almost undeveloped; occiput convex; each pair of weak ocellar, postocellar bristles, inner and outer verticals strong; a row of postocular ciliation. Antenna placed at dorsal $1/3$ of head, much elongate, about $2 \times$ as long as head, minutely pubescent; 1st segment $1.5 \times$ as long as globose 2nd segment, both with a few short apical setulae; 3rd segment very long, nearly $3 \times$ as long as 2 basal segments together, gradually tapering towards tip which has no sign of segmentation separating arista or style. Compound eye rather small, microscopically pubescent. Mouth parts large, palpus nearly $1/2$ as long as head, pointing forwards, clothed with longish hairs; proboscis vertical, labrum slightly shorter than head height, broad at base, gradually tapering to tip which is armed with 4 teeth; labella horizontal, enlarged and sucker-like as in *Clinocera*, surrounding apical portion of labrum, bearing many longish hairs; maxillary galea well developed.

Thorax as deep as long; mesonotum evenly arched, pronotum little developed; prosternum not isolated from episternum. Chaetotaxy: Pronotum with a few setulae on each side; proepisternum with a few fine hairs; acrostichals and dorsocentrals uniserial, a humeral, an intrahumeral, a posthumeral, 2 notopleural, 2 prealar, a supra-alar, a postalar and 4 scutellar bristles; steropleura and metathoracic pleuron bearing a few fine hairs. Legs long, much thicker than in *Trichopeza* or *Clinocera*; front coxa $3/5$ as long as front femur, former with long hairs in front. Femora and tibiae long-haired;

middle femur as long as hind one, armed beneath with a few subapical anteroventral and several posteroventral short spines; hind femur with rather dense posterodorsal bristles at middle; tibiae slender and simple; hind tibia with several posterodorsal bristles, and fringed behind with a dense "comb" at tip. Tarsi slender and short-haired; front and hind metatarsi with a subbasal bristle beneath; 5th tarsomeres compressed, and apically produced into a blunt tip as in *Clinocera*: empodia pulvilliform, much longer than pulvilli; in the type-species apical portion of male middle tarsus twisted, its 5th tarsomere slightly flattened and dilating apically, produced subbasally into a short anterior projection which receives an enlarged and curved anterior ungue.

Wing long and moderately broad, axillary lobe more developed than in *Trichopeza*; venation basically same as in *Hilara* except for incomplete Sc; costa continued round to base of wing as a distinct "ambient" vein; Sc not reaching costa; R-fork very long, R₄ and R₅ running parallel to each other as in *Hilara*; subbasal portion of R₄ angled and often sending a proximally directing short stump; discal cell with more or less pointed apex and with three veins therefrom; 1st basal cell longer than 2nd basal cell which is also longer than anal cell; Cu recurrent and running with an even curve into anal vein almost without an angle; free portion of anal vein almost disappearing.

Abdomen tubular but rather short, ending in a large complicated genitalia in ♂, in ♀ truncate and fringed 7th segment concealing female terminalia. ♂ postabdomen (Fig. 11) complicated, 6th tergum with a pair of subdorsal projections bearing dense bristles apically; 7th tergum with a bare dorsal projection and subdorsal protuberances, and densely bristled laterally; 8th segment reduced dorsally. ♂ genitalia (Fig. 11) large, carried above 7th and 8th segments, ventral lamella large, which bears several asymmetrical complicated processes including phallic organs. ♀ terminalia: 7th segment truncate apically and bearing stiff bristles on posterior margins; the segment almost concealing the terminalia; 8th segment much short, its tergum forming a short dorsal apodemal process on anterior margin and a pair of lateral processes furnished with longish hairs which have appearance of cerci; 8th sternum pilose; 9th segment small, its tergal element with many minute spinules; cerci of very small, rather membranous blunt protuberances.

Type-species: *Ephydrempis setiventris* SAIGUSA, sp. nov.

Remarks: This new genus somewhat resembles *Trichopeza* RONDANI, 1856 from the Palaearctic Region and *Proagomyia* COLLIN, 1933 from Chile in the elongate 3rd antennal segment and wing venation. The special resemblance between the new genus and *Trichopeza* are found in the 3rd antennal segment lacking a style or arista, the long vertical proboscis, and the general patterns of male and female terminalia. But the new genus is quite different from *Trichopeza* in the broad face, the prosternum united with episternum, the stout proboscis with *Clinocera*-like labella, the apically produced 5th tarsomeres. Chilean *Proagomyia* has the *Clinocera*-like 5th tarsomeres and sucker-like labella as in the new genus, but in *Proagomyia* the proboscis is short as in *Clinocera*, and the 3rd antennal segment has a distinct two-segmented style. The new genus is most closely related to *Sabroskyella* WILDER, 1982 from California, but *Sabroskyella* has the normally short empodia and the simple 5th tarsomeres which do not have the apical prolongation.

This empidid flies the watersurface of streams or puddles in a path showing somewhat similar manner as in *Hilara* spp., but more strongly flutters the wings. Purpose of this flight is not clarified. It was also observed sitting on the overhanging surface of rocks close to water in the streams.

Ephydrempis setiventris SAIGUSA, sp. nov.

♂. Head (Fig. 10) dark brown, densely dusted brownish grey, cranial bristles black above, brownish beneath. Antenna black, palpus dark brown clothed, with fine brownish hairs; mouth parts dark brown. Thorax dark brown, terga densely dusted greyish brown, pleura brownish grey pollinose; viewed from above mesoscutum greyish brown pollinose with greyish humeri and notopleural areas and blackish posthumeral areas laterad of dorsocentral bristles. Chaetotaxy: Strong bristles of terga black; humerus with tiny brownish hairs in addition to strong humeral bristle, a posthumeral, 2 notopleurals strong, posterior notopleural bristle often with an additional weak one behind it, prealar rather weak, a supra-alar and a postalar long and strong, the latter sometimes with a tiny brown bristle in front; 7-10 dorsocentrals and 3-4 acrostichals strong, the latter with 1-2 weaker ones in extreme front of scutum, distance between stronger inner scutellars $2 \times$ as long as that between outer and inner scutellars. Pleural hairs yellow.

Legs brown, thinly dusted brownish grey, apical 1/2 of coxae, trochanters, basal portion of femora tawny. Front femur short-haired above, a row of dorsal bristles on basal 2/3, anterior row of setae including 1-2 strong bristles near tip, double row of long ventral ciliation; middle femur somewhat incrassate, long-pilose beneath as in front femur, armed with 3-4 short anteroventral spines near tip and complete row of stronger posteroventral spines which are 1/2 as long as thickness of femur and become denser towards tip; hind femur thickened beneath at middle 1/2, only long pilose beneath, but with rather dense posterodorsal setae proximad of the middle. Front and middle tibiae slender, the former longer pilose than the latter; hind tibia gradually dilating apically, but tapered at apical 1/4, then again dilating to tip, its pile erect, longer beneath at base, mixing several anterodorsal bristles. Tarsi slender and short haired; 3rd tarsomere subequal to 5th in length, 4th tarsomere nearly 1/2 of the 3rd; 5th tarsomere and unguis of middle leg deformed as stated in generic description.

Wing evenly brownish tinged; stem of R-fork $1.2 \times$ as long as R_5 ; apex of discal cell slightly proximad of R_4 base. Halter yellowish brown.

Abdomen dark brown, thinly dusted brownish grey, short-haired except for black submarginal bristles of terga; 6th to 8th tergal structures more or less asymmetrical, subdorsal processes of 6th tergum densely clothed with short black bristles; sides of 7th tergum clothed with long brown bristles. Genitalia as illustrated (Fig. 11).

Length: Body 3.7-4.1 mm; wing 6.0-6.5 mm.

♀. Resembling the male, leg pile sparser and shorter, middle and hind femora weakly incrassate, hind tibia evenly slender, middle 5th tarsomere slender and simple, with normally asymmetrical unguis. Seventh abdominal tergum with dense long brown hairs on posterior margin; lateral processes of 8th tergum spatulate, and bearing dense short golden hairs.



Fig. 11. *Ephydrempis setiventris*, sp. nov., ♂ genitalia with pregenital segments, lateral aspect.

Length: Body 2.9-4.0 mm; wing 5.5-6.1 mm.

Type-locality: Topke Gola (3,700 m) 27°38'N, 87°35'E - Thurukpa (2,600 m) 27°36'N, 87°32'E, E. Nepal.

Distribution: Nepal Himalaya (2,100-4,700 m).

Holotype ♂, Topke Gola (3,700 m) - Thurukpa (2,600 m), 9.vii. 1972, J. EMOTO leg. (in the Nepalese Insect Collection at Biological Laboratory, College of General Education, Kyushu University).

Paratypes: 30♂♂49♀♀, same data as holotype; 1♂1♀, Thudam (3,500 m) 27°45'N, 87°32'E - Tanga La (4,700 m) 27°40'N, 87°36'E, 9.vii. 1972, J. EMOTO leg.; 1♀, Thudam (3,500-3,800 m), 27° 45'N, 87° 31'E - 27° 46'N, 87° 35'E, 18. vi. 1972, J. EMOTO leg.; 4♂♂6♀♀, NE of Thudam (4,000 m), 27° 47'N, 87° 36'E, 28. vi. 1972, H. SHIMA and J. EMOTO leg.; 11♂♂3♀♀, same locality, 25. vi. 1972, H. SHIMA leg.; 1♀, same locality and collector; 1♂, Topke Gola (3,700 m), 27° 38'N, 87° 35'E, 8. vii. 1972, J. EMOTO leg.; 1♀, Papun (2,100 m), 27° 32'N, 87° 38'E, 15. vii. 1972, H. SHIMA leg.; 1♂2♀♀, Dobang Kharka (2,350 m) - Taritire Kharka (2,600 m) 28° 36'N - 83° 24'E, 26. ix. 1971, A. NAKANISHI leg.; 1♂1♀, Chaksila (2,800 m), 27° 26'N, 86° 57'E, 13. vii. 1981, Malaise trap, J. EMOTO leg.; 1♂4♀♀, Salpa (3,000-3,200 m), 27°27'N, 86°55'E, 21. vii. 1981, J. EMOTO leg.; 8♂♂13♀♀, Salpa La (2,800-3,000 m), 23. vii. 1981, J. EMOTO leg.; 1♂, same locality and collector, 28. vii. 1981, Malaise trap; 1♂3♀♀, Jumbesi Khola (3,450 m), 27° 38'N, 86° 33' E, Malaise trap, J. EMOTO leg.; 17♂♂19♀♀, same locality (3,470 m), 12. vii. 1981, J. EMOTO leg.