

DELPHACIDAE FROM JUAN FERNANDEZ
(HOMOPTERA : FULGOROIDEA).

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THE following descriptions of Delphacidae are based on material collected in the Juan Fernandez group of islands by Fr. F. G. Kuschel and forwarded to the British Museum (Natural History). It is through the kindness of Dr. W. E. China and the authorities of the British Museum (Natural History) that the writer has been able to examine this collection—a privilege which he here gratefully acknowledges.

The Juan Fernandez group lies some 380 miles west of Valparaiso, and comprises two main islands, Mas-a-Tierra and Mas-a-Fuera, and the islet of Santa Clara. Mas-a-Tierra and Mas-a-Fuera, on which the present collections were made, lie a hundred miles apart. Mas-a-Tierra reaches a height of 3,225 feet (El Yunque) and is extremely rugged.

No earlier reports appear to have been made on Fulgoroidea from the group so that the present collection, though small, is of considerable interest. The bulk of the collection falls into six species of the alohine genus *Nesosydne*, while the Delphacini are represented by two species: seven are new to science, and differ from known species in structural details of the male genitalia.

As far as described species are concerned *Nesosydne* is known only from Hawaii and (as *Ilburnia*) the Marquesas, but Zimmerman (1948 : 173) reports the presence of species of the genus (or of closely allied genera) in the Society, Austral and Mangareva Islands. This indicates a wide distribution in the South Pacific and Hawaii. The genus does not occur in Micronesia, and has never been reported from South America, where the few known alohine genera are profoundly different. In view of the relatively rich speciation within the genus in Juan Fernandez the conclusion appears inescapable that this part of the fauna is of South Pacific origin and furthermore is not of recent arrival.

Nesosydne Kirkaldy

Kirkaldy, 1907, *Proc. Hawaii. ent. Soc.* 1 : 161. Orthotype, *Nesosydne koae* Kirkaldy, *loc. cit.*

Muir (1919 : 6 ; 1919a : 48) sank *Nesosydne* under *Ilburnia* White. Zimmerman (1948 : 171) considers the known material of *Ilburnia* to be too scanty to permit the conclusion to be drawn that the two genera are really the same. The writer has examined the material seen by Muir, and provisionally is disposed to recognise *Nesosydne* as separate. It is probable that Muir's views on the relationship between *Ilburnia* and *Nesosydne* were influenced by his knowledge of the asiracine *Ugyops*, some members of which seem fully as far apart as these two genera, yet, in a general conspectus, cannot be segregated.

The difficulty lies in assessing the value of the differences: the following are the chief to be noted between *Nesosydne koae* and *Ilburnia ignobilis*, the respective type species.

- Antennae longer than head and thorax, basal segment longer than second : basal segment of rostrum reaching post-coxae, apical segment reaching base of abdomen, vertex more or less imperceptibly curving into frons from basal disc ; pronotum as long as mesonotum, pronotal disc as long in middle as broad across base or practically so, strongly tricarinate with lateral carinae straight, reaching hind margin almost in line with mesonotal carinae ; mesonotum tricarinate with median carina reaching to apex of scutellum ; head very much narrower than pronotum, its width, including eyes, subequal to length of basal antennal segment ; pronotum laterally carinate ; species large ***Ilburnia ignobilis***
- Antennae not longer than vertex and pronotum combined, basal segment shorter than second ; basal segment of rostrum reaching half way between pro- and mesotrochanters, apical segment scarcely surpassing mesotrochanters, if at all, vertex in profile subrectangulately rounding into frons ; pronotal disc twice as broad as long, lateral carinae strongly diverging and not reaching hind margin ; mesonotum tricarinate, meso-scutellum inflected dorsad towards apex, ecarinate ; head practically as wide as pronotum, its width, including eyes, more than four times length of first antennal segment ; pronotum not laterally carinate ; species small ***Nesosydne koae***.

As can be judged by comparing them with the following descriptions, most of these differences are of no more than specific value, so that Muir's contentions cannot be dismissed as untenable on present data. The question will have to be reconsidered when it is possible to examine the male genitalia of *Ilburnia ignobilis*. For the present *Ilburnia* stands apart from *Nesosydne* in its relative antennal size and proportions, in the longer rostrum, in the much narrower head relative to the width of the pronotum and in the percurrent median mesonotal carina.

Until more is known about variation in alohine genera the position of *Delphax simulans* Walker (Galapagos Is.) must remain obscure. The calcar is concave on one side and bears sixteen teeth on the margin : the species may be delphacine.

No biological data accompany the specimens, but it is worth noting that many were found to have the sporangia of ferns adhering to the integument.

Key to Juan Fernandez species of *Nesosydne*.

- 1 Lateral margins of pronotum as long as eye in same line, strongly subfoliately carinate **vulcan***
- Lateral margins of pronotum short, not nearly as long as eye in same line, not at all carinate 2
- 2 Antennae with segments of equal length **sappho***
- 3 Antennae with basal segment shorter than distal 3
- 3 Tegmina much surpassing abdomen, heavily infumed, membrane mostly pale, wings fully developed ; basal antennal segment as long as broad **oreas***
- Tegmina not or scarcely surpassing abdomen, not marked as above, wings absent ; basal antennal segment longer than broad 4
- 4 Frons widest just distad of middle, distinctly incurved to suture ; calcar 11 toothed **calypso***
- Frons widest three-quarters from base or even nearer to apex 5
- 5 Calcar 9 toothed ; M once forked distad of transverse veinlets **philoctetes***
- Calcar 11 toothed ; M simple to margin **minos***

* Described as new below.

Nesosydne sappho sp. n. (Fig. 1, A-G.)

Antennae with second segment as long as first, first longer than wide at apex (3:1), second longer than broad (3.2:1). Frontal carina forked at curvature into vertex. Rostrum slender, attaining post trochanters, apical segment only slightly shorter than subapical. Tegmina slightly surpassing apex of abdomen; wings absent. Post-tibiae laterally two-spined, apically five-spined. Calcar with eight teeth. Basal metatarsal segment six-toothed, second segment four-toothed.

Testaceous-fuscous: margins and carinae of head, a row of six or seven spots in each compartment of frontal disc, two submarginal spots on pronotum near tegulae, lateral carinae of mesonotal disc, posterolateral margins, and scutellum, rostrum, mesocoxae, postfemora at base, post-tibiae at apex, mesal surface of calcar, basal metatarsal segment distally, pale testaceous or stramineous. Frons pallid near frontoclypeal suture.

Tegmina hyaline with yellowish-brown suffusion; a suffusion at base of clavus, a spot on margin at union of claval veins, another spot on margin just distad of apex of clavus and a spot at node, fuscous; distal margin of tegmina pallid.

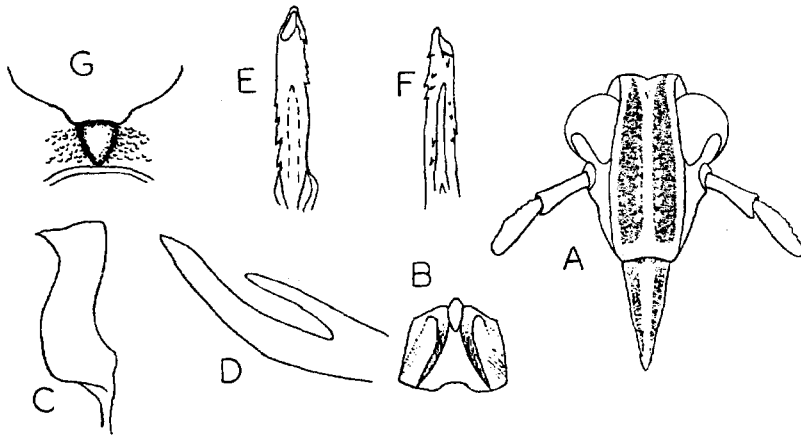


FIG. 1.—*Nesosydne sappho* sp. n. A, Frons and clypeus; B, anal segment of male, posterior view; C, right genital style; D, sketch outline of aedeagus, right side; E, apex of aedeagus, ventral view; F, apex of aedeagus, dorsal view; G, armature of diaphragm.

Anal segment of male with lateroapical angles rather closely approximated, each produced ventrad in a long stout spine curved ventrad and laterad. Pygofer with diaphragm moderately narrow in middle portion, dorsal margin concave and further subangulately excavate in median portion, surface granulate, with a medial armature consisting of a subtriangular sclerotized ridge, with apex directed ventrad and base extended cephalad in a smooth plate. Aedeagus slender, comprising the main limb, which ascends obliquely distad and is beset with about 21 teeth, and a laterally-compressed ensiform accessory limb arising dorsally at base of main limb and directed caudad above it; orifice of aedeagus ovate, on left at apex. Genital styles not long, rather broad throughout with inner margin concave, outer convex in basal third, concave in middle third, and convex distally, apical margin obliquely subtruncate, inner angle subacuminately produced; deflexed slightly at tip.

Male: Length, 4.2 mm.; tegmen, 4.8 mm.

Female: Length, 5.9 mm.; tegmen, 4.8 mm.

Holotype and nine males and twenty-three females JUAN FERNANDEZ: Mas-a-tierra; Cerro Yunque, 915 m., 10.ii.1952; Picacho Central, 600 m.,

4.ii.1952; P. del Yunque, 200 m., 2.i.1952, 12.ii.1952, Oreja de Conejo, 400 m., 23.ii.1951; Alto Pangal, 600 m., 6.ii.1952; Alto Inglés, 600 m., 6.ii.1952; Miradero, 500 m., 31.xii.1951; Alto Francés, 450 m., 7.iii.1951; Mas-a-fuera; Las Chozas, 700 m. 14.i.1952 (*F. G. Kuschel*). Holotype male from Cerro Yunque.

***Nesosydne minos* sp. n.** (Fig. 2, A-G.)

Antennae with second segment longer than first (2:1) first segment longer than broad (1.8:1), second longer than broad (3.6:1). Frontal carina forked at curvature into vertex. Rostrum scarcely attaining post-trochanters, apical segment about four-fifths length of subapical. Tegmina reaching to apex of abdomen; wings absent. Post-tibiae laterally two-spined, apically five-spined; calcar eleven-toothed, basal metatarsal segment with six teeth, second metatarsal segment with four teeth.

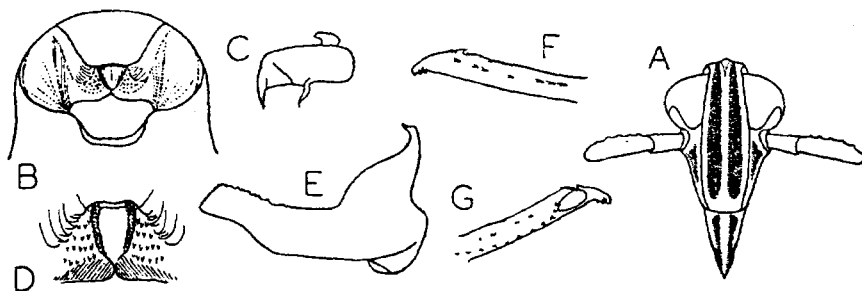


FIG. 2.—*Nesosydne minos* sp. n. A, frons and clypeus; B, pygofer, posterior ventral view; C, anal segment of male, right side; D, armature of diaphragm; E, right genital style, side view; F, apical part of aedeagus, right side; G, apical part of aedeagus, left side.

Intercarinal areas of frons and clypeus, pronotum in middle of disc and behind eyes, intercarinal areas of mesonotum, procoxae in basal half, mesopleurites, a lighter suffusion on meso- and post-femora distally, post-tibiae at base and apex and post-tarsi, fuscous-piceous.

Tegmina hyaline, a spot on margin at node and at apex of united claval veins, Sc + R, M and Cu fuscous-piceous; transverse veinlets subhyaline, margin distad of claval apex pallid.

Anal segment of male with lateroapical angles each produced ventrad into a very short stout spine. Pygofer in posterior view wider than deep, laterodorsal angles not at all produced; diaphragm deep at sides, moderately narrow at middle, dorsal margin broadly concave, submedian areas with about four rows of granules, median armature in form of a broad subtriangular sclerotised ridge with apical part of triangle obsolescent. Aedeagus relatively short, ascending and tapering distad with orifice on left subapically; ten teeth on upper margin, five teeth ventrolaterally on right, and about nine on left. Genital styles very broad in basal third, much narrower in median third, and still narrower, and directed obliquely, in distal third.

Male: Length, 3.6 mm.; tegmen, 2.8 mm.

Holotype ♂ and ten males and nineteen females, JUAN FERNANDEZ: Mas-a-tierra; Cerro Yunque, 915 m., 10.ii.1952; Picacho Central, 600 m., 4.ii.1952; Cerro Chumacera, 22.ii.1951; Cerro Alto, 600 m., 1.ii.1952; Miradero, 550 m., 15.ii.1951, 31.xii.1951; Q. d.l.Laura, 1.iii.1951; Alto Inglés, 600 m.,

6.ii.1952; Alto Pangal, 600 m., 6.ii.1952; Villagra, 21.ii.1951; P. del Yunque, 200 m. 9.ii.1952; Mas-a-fuera, Las Chozas, 700 m., 14.i.1952; Q. d.l. Vacas, 17.i.1952 (*F. G. Kuschel*). Holotype male from Cerro Yunque.

Nesosydne oreas sp. n. (Fig. 3, A-F)

Antennae with second segment longer than first (2:1) first segment only slightly longer than broad (1.2:1), second segment longer than broad (3.3:1). Frontal carina forked at curvature into vertex. Rostrum attaining post-trochanters, apical segment scarcely shorter than basal. Post-tibiae laterally two-spined, apically five-spined. Calcar ten-toothed. Basal metatarsal segment six-toothed, second metatarsal four-toothed. Tegmina much surpassing apex of abdomen. Wings fully developed.

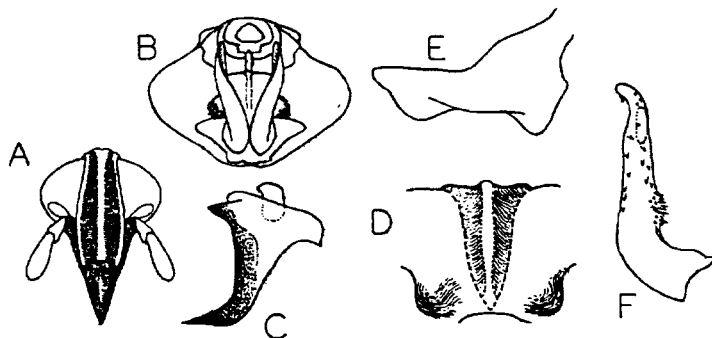


FIG. 3.—*Nesosydne oreas* sp. n. A Frons and clypeus; B, male genitalia, posterior view; C, anal segment of male, right side; D, armature of diaphragm; E, right genital style, side view; F, aedeagus, right side, orifice seen by transparency.

Piceous; carinae of frons and vertex, and of pronotal disc, rostrum and legs stramineous. Hind margin of mesonotum interruptedly testaceous. Tegmina translucent, costal cell and anal angle lightly, corium between Sc + R and claval margin heavily, infusate, especially along the veins. Veins concolorous, transverse veinlets white. Wings pearly grey with veins dark fuscous.

Anal segment of male short, with apical margin transverse with lateroapical angles scarcely or not prominent, a pair of long very stout processes arising ventroapically, directed ventrad then caudad. Pygofer in posterior view much wider than deep (dorso-ventrally), laterodorsal angles not produced; diaphragm deep, dorsal margin weakly convex in middle third, a pair of tumescences near ventral margin visible just laterad of genital styles; armature elongately triangular, smooth, rising from each side to a strong median T-shaped ridge, upper margin shallowly triconvex, slightly incised just laterad of armature. Aedeagus strongly ascending distad and sinuately tapering, curved caudad at apex; orifice distinctly subterminal on left side, a minutely denticulate elevated area on dorsal margin near base, about sixteen other denticles distributed as figured.

Genital styles in side view broad and subquadrate in basal third, median third much narrower, parallel-sided, apical third a little wider with apical margin oblique. In posterior view styles ascending subvertically, tapering from base to slightly twisted apical quarter.

Male: Length, 3.0 mm.; tegmen, 3.6 mm.

Holotype ♂ and nine males, JUAN FERNANDEZ: Mas-a-tierra; Cerro Chumacera, 22.ii.1951; Q. d.l. Laura, 1.iii.1951; P. del Yunque, 200 m., 9.ii.1952; Cerro Yunque, 915 m., 10.ii.1952; Picacho central, 600 m., 4.ii.1952; Alto Pangal 600 m., 6.ii.1952; Cerro Alto, 600 m., 1.ii.1952. Two

males and one female Juan Fernandez labelled "1", "9", "1" respectively (*F. G. Kuschel*). Holotype male from Cerro Alto.

***Nesosydne calypso* sp. n.** (Fig. 4, A-F)

Antennae with second segment longer than first (1.6 : 1), first segment longer in anterior view than wide at apex (1.7 : 1), second longer than broad (2.7 : 1). Frontal carina forked at curvature into vertex. Rostrum scarcely attaining post-trochanters, apical segment about three-quarters length of subapical. Wings absent, tegmina reaching to apex of abdomen. Post-tibiae laterally two-spined, apically five-spined, basitarsus seven-toothed, second metatarsus three- or four-toothed, post-tibial calcar eleven-toothed.

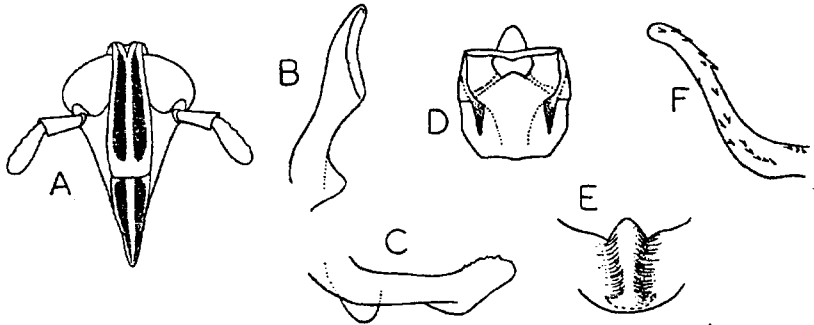


FIG. 4.—*Nesosydne calypso* sp. n. A, Frons and clypeus; B, left genital style, posterior view; C, left genital style, side view; D, anal segment of male, posterior view; E, armature of diaphragm; F, aedeagus right side.

Light form: Stramineous; base of frons, sides of head before eyes, a spot on pronotum behind eyes, tegulae dorsally, mesonotum laterally and metathoracic tergites fuscous; two impressions on vertex, one on each side of pronotal disc, and a suffusion along middle line of mesonotum testaceous-fuscous. Tegmina hyaline with faint yellowish suffusion, a suffusion along basal margin of clavus and an elongate spot at apex of clavus dark fuscous.

Dark form: As above, but with intercarinal areas of head and mesonotum, procoxae at base and thoracic pleurites, a suffusion over femora distally and tibiae except at apex, most of abdominal ventrites and genitalia fuscous. Tegmina hyaline with faint yellowish suffusion, basal margin of clavus, a spot at apex of clavus, venation except *Cu*₁ and *Cu*₂ at level of middle of corium, and distal transverse veinlets, fuscous piceous.

Anal segment of male with lateroapical angles rather widely separated, each produced ventrad in a stout spine. Pygofer in posterior view wider than deep dorsoventrally; diaphragm rather broad, produced dorsoventrally at middle into a broad ridge, which in side view projects caudad more strongly at its upper end, surface of diaphragm laterad of armature granulate; dorsal margin of diaphragm shallowly concave, but abruptly convex at middle. Aedeagus shallowly S-shaped, beset with about sixteen spines in a row from upper surface at apex down left side to near base, and about six spines along right side near ventral margin; orifice on left side, elongate-ovate and distinctly subterminal. Genital styles relatively narrow, in side view with a large triangular lobe near base on inner face directed ventromesad; apical part of style directed dorsocaudad; apical margin in posterior view weakly concave.

Male: Length, 3.6 mm.; tegmen, 3.1 mm.

Holotype ♂ and six males, JUAN FERNANDEZ: Mas-a-tierra; Cerro Alto 600 m., 1.ii.1952; Cerro Chumacera, 22.ii.1951; Miradero, 550 m. 15.ii.1951; Picacho Central, 600 m., 4.ii.1952; (one male) Mas-a-fuera; Inocentes Bajos,

1000 m., 27.i.1952. One specimen labelled merely "1" (*F. G. Kuschel*). Holotype male from Cerro Alto.

***Nesosydne philoctetes* sp. n.** (Fig. 5, A-D)

Antennae with second segment 1.9 times as long as first, 2.4 times as long as wide; basal segment 4.0 times as long as broad. Rostrum attaining post-trochanters, apical segment only a little shorter than subapical.

Tegmina slightly surpassing abdomen; wings absent. Post-tibiae laterally two-spined, apically five-spined, basal metatarsal segment six-toothed, second segment four-toothed, calcar nine-toothed.

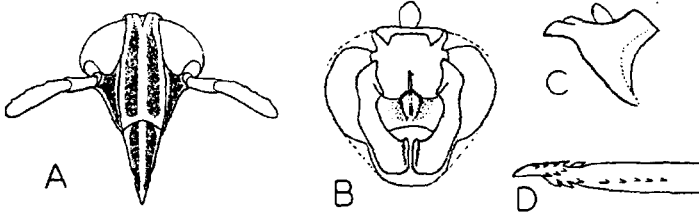


FIG. 5.—*Nesosydne philoctetes* sp. n. A, Frons and clypeus; B, pygofer and genital styles, posterior view; C, anal segment of male, right side; D, aedeagus, right side.

Stramineous; intercarinal areas of head, pronotum outside disc except broadly along hind margin, mesonotum laterally, thoracic pleurites, abdominal tergites and ventrites and pygofer in basal half fuscous to fuscous-piceous; intercarinal areas of pronotal and mesonotal disc, protarsi and a suffusion along meso- and postfemora testaceous-fuscous.

Tegmina hyaline; costal cell at base and apex, clavus at inner angle and at apex, and vein M at apex fuscous.

Anal segment of male with lateroapical angles each produced ventrad in a very short broad spine.

Pygofer in posterior view broader than deep dorsoventrally, dorsolateral angles slightly produced and directed mesad; diaphragm moderately deep, dorsal margin broadly convex, ventral margin concave, surface granulate sublaterally, armature comprising a median ridge and a line of granules on each side, these lines straight, converging ventrad.

Aedeagus ascending distad, directed caudad at apex and deflexed at tip, a row of three coarse teeth followed by a row of four dorsally near apex, a row of eight teeth dorsally on left, and a row of five ventrally on left, and a slightly interrupted oblique row of eight teeth laterally and subventrally on right side; orifice subterminal. Genital styles relatively long, in posterior view with inner margin strongly callused at base, strongly concave in basal two-thirds, then produced in a slight eminence, then more weakly concave; outer margin sinuately convex, indented a little below apex, apical margin obliquely truncate, apical angle subspinose.

Male: Length, 3.2 mm.; tegmen, (brachypterous) 3.2 mm.

Holotype ♂ and two males and three females, JUAN FERNANDEZ: Mas-a-tierra; P. del Yunque, 200 m., 9.ii.1952, B. Cumberland, 1.i.1952 (*F. G. Kuschel*). Three of these specimens are labelled merely "9". One female from Mas-a-fuera; La Correspondencia, 1300 m., 20.i.1952 (*F. G. Kuschel*). Holotype male from P. del Yunque.

***Nesosydne vulcan* sp. n.** (Fig. 6, A-G)

Antennae with second segment longer than first (2:1), first segment longer than broad (2.1:1) second longer than broad (3.6:1). Frontal carina simple to apical margin

of vertex, sides of frons rather strongly arcuate. Rostrum attaining post-trochanters, and lying between them, apical segment about half as long as subapical.

Pronotum with lateral margin at least as long as eye in same line, distinctly foliate. Tegmina sometimes reaching to apex of abdomen, sometimes just covering base, Sc + R forked near middle of tegmen, M simple, Cul forked level with junction of common claval vein and margin. Wings absent. Post-tibiae laterally two-spined, apically five-spined; calcar seven-toothed, occasionally eight-toothed; basal metatarsal segment with six teeth, second metatarsal segment with four teeth.

Testaceous; frons brown, with a characteristic pattern of five small round spots along upper portion of each lateral margin, and four transverse bars, two in the basal half of the disc and two others, more closely approximated, just distad of middle, median carina and

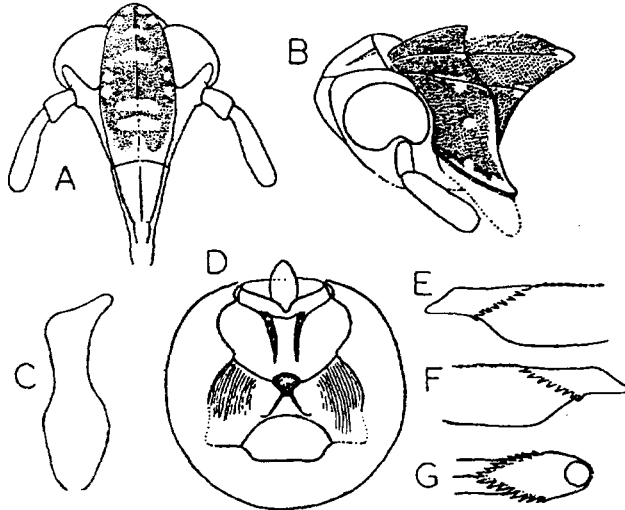


FIG. 6.—*Nesosydne vulcan* sp. n. A, Frons and clypeus; B, vertex, pronotum and left side of mesonotum, laterodorsal view; C, left genital style, posterior view; D, anal segment and pygofer, posterior view; E, aedeagus, right side; F, aedeagus, left side; G, aedeagus, dorsal view of apical part.

lateral margins distally, pale yellow; clypeus, vertex, antennae in part, pronotum except for three confluent spots overlying lateral carinae of disc, a round spot in middle of each sublateral field, and three spots along each lateral margin, and mesonotum except for a spot at base of each lateral discal carina and over mesoscutellum, dark castaneous; the aforementioned spots pale yellow. Pleurites, femora and tibiae at base and apex, tarsi, except distally, and lateral margins and areas of tergites of abdomen, suffused yellowish-brown. Tegmina hyaline with dull yellow suffusion, veins and a suffusion at node, brown; a spot just basad of Sc + R fork, another just basad of Cul fork, and two linear marks along sutural margin pallid, ivory-yellow; two linear marks on sutural margin fuscous-piceous.

Anal segment of male narrowly ring-like with lateroapical angles each produced ventrad in a moderately long spinose process, directed ventrad. Pygofer in posterior view about as wide as deep, laterodorsal angles not produced; diaphragm deep at sides, narrowing to middle, dorsal and ventral margins concave; armature knob-like, heavily pigmented, strongly projecting caudad with a pigmented ridge extending ventro-laterad from each lower angle. Aedeagus short, porrect caudad, in profile stout, rather abruptly narrowed in apical third, an oblique collar comprising about eight teeth on each side at base of con-

stricted portion ascending obliquely basad, and uniting dorsally, whence a row of minute teeth continues basad along middle line; orifice round, terminal, facing dorso-caudad. Genital styles of moderate length, broadest at base, slightly constricted near middle, apical margin strongly oblique, outer apical angle subrectangulately or obtusely rounded, inner apical angle subacutely produced, rounded at tip.

Male: Length, 4.7 mm.; tegmen, 3.9 mm.

Female: Length, 5.0 mm.; tegmen, 4.1 mm.

Holotype male and a female from JUAN FERNANDEZ; Mas-a-tierra; Alto Francés, 450 m. 7.iii.1951 (type locality); Cerro Alto, 600 m., 1.ii.1952. An additional female, labelled merely "6", probably was taken in Mas-a-tierra (*F. G. Kuschel*). This species is immediately recognisable by the long foliate lateral margins of the pronotum and the pattern of pale markings on the frons.

Delphacodes Fieber.

Fieber, 1866, *Verh. zool.-bot. Ges. Wien* 16: 524. Logotype, *Delphacodes mulsanti* Fieber, *ibid.*: 526; designated by Kirkaldy, 1904, *Entomologist* 37: 177.

Delphacodes kuscheli sp. n. (Fig. 7, A-D)

Post-tibial spur with about twenty minute teeth along margin.

Fuscous-piceous; carinae of frons, clypeus, frontoclypeal suture, vertex and pronotum, lateral fields of pronotum, and tegulae, basal segment of rostrum, procoxae distally, pro- and mesotrochanters, four stripes along pro- and mesofemora, postfemora at apex,

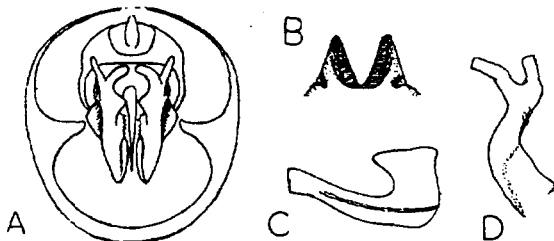


FIG. 7.—*Delphacodes kuscheli* sp. n. A, Male genitalia, posterior view; B, median portion of diaphragm; C, aedeagus, right side; D, right genital style, side view.

post-tibiae and post-tarsi, pallid ivory-white; antennae stramineous, carinae of mesonotum castaneous. Tegmina translucent, infumed, a linear mark on margin at apex of clavus and veins fuscous-piceous, tegminal margin, except for aforementioned mark, greyish white.

Anal segment of male about as long as broad, lateroapical angles each produced ventrad in a moderately long slender spine, incurved throughout its length. Pygofer in posterior view almost circular, diaphragm narrow at sides, dorsal margin on each side of middle very strongly produced dorsad in a smooth triangular lobe, each lobe higher than its basal width, and subacutely rounded at apex. Aedeagus short, abruptly bent near base, its distal portion tubular, correct, of almost equal width throughout but narrowest one-third from apex, devoid of ornamentation except for a straight beaded ridge or thickening traversing each side almost throughout length; orifice terminal. Genital styles moderately long and thick, strongly S-shaped, with lateroapical angles strongly and unequally produced, each truncate distally.

Male (brachypterous): Length, 2.8 mm.

One male, the holotype, JUAN FERNANDEZ: Mas-a-tierra; B. Cumberland, 4.iii.1951 (*F. G. Kuschel*), B.M. 1954-57. This species is dedicated to its collector, Fr. Kuschel.

Delphacodes selkirki Muir. (Fig. 8, A-C)

Sogata selkirki Muir, 1924, in Bergroth, *Nat. Hist. Juan Fernandez* 3 (Zool.): 401.

Fuscous; carinae and margins of head, about four transverse bands across median portion of frontal disc, pronotum, mesonotum, antennae, rostrum except at apex, femora except marginally, tibia at base and apex, lateral spines of post-tibiae, calcar and tarsi (except at base), testaceous. Brachypterous tegmina hyaline, a suffusion at base brown, a spot at middle of apical margin and another at apex of clavus, and a suffusion across intervening cells between these spots fuscous; apical margin distad of this suffusion pallid yellow.

Post-tibiae with two spines laterally, five at apex, basal metatarsal segment seven-spined; second segment four-spined; calcar with twenty-three even minute teeth along edge.

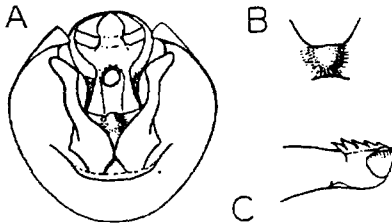


FIG. 8.—*Delphacodes selkirki* Muir. A, Male genitalia, posterior view; B, armature of diaphragm; C, apex of aedeagus, left side.

Anal segment of male short, ring-like, lateroapical angles each produced ventrad in a long, moderately stout spine, bent ventrad, then ventrolaterad and finally curved ventromesad at apex. Pygofer in posterior view about as broad as deep, laterodorsal angles strongly produced and incurved; diaphragm broad at sides, narrow medially; surface hollowed out submedially, armature smooth, projecting caudad in a knob-like boss. Aedeagus short and broad, narrowed distad with dorsal margin straight, ventral margin sinuate; orifice terminal, deeper on left side, upper rim a little projecting and surmounted by an incomplete crown of eight or nine teeth. Genital styles moderately elongate, broad at base, sinuately tapering to near apex, where they are a little expanded and obliquely truncate.

Male: Length, 3.1 mm.

Female: Length, 3.0 mm.

Two brachypterous males and eleven brachypterous females, JUAN FERNANDEZ: Mas-a-tierra; 200 m., P. del Yunque, 9.ii.1952, B.M. 1954-57; Miradero, 300 m., 10,13.iii.1951; B. Cumberland, 4.i.1952; two specimens bearing only the labels "5" and "9" respectively (*F. G. Kuschel*).

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