

Distribution.

Il s'agit d'une espèce paléarctique commune qui est sans aucun doute introduite à Sainte-Hélène.

SAINTE-HÉLÈNE : Scotland Sta., 12.IV.1960, *K.R. Sim* (on leaf of Grape-Vine), 1 ♂; Varneys, 14.V.1976 (Aloe), *A. Loveridge*, 1 ♂.

3. Fam. DELPHACIDAE

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This report is based on the study of 295 specimens of *Delphacidae* collected during the expeditions of the Musée Royal de l'Afrique Centrale to St. Helena (1965-1966, 1966-1967), supplemented by material in the British Museum (Natural History) taken by C. DARWIN (1836), T.V. WOLLASTON (1877), H.F.D. BARTLETT (1936) and A. LOVERIDGE (1961, 1963-1964).

The family is represented in the island by four genera, with the following species : *Ilburnia ignobilis* White, *I. diana* sp.n. (Alohini), *Matutinus* sp., *Sogatella kolophon* (Kirkaldy), *S. nebris* (Fennah), *Toya propinqua* (Fieber), *T. tuberculosa* (Distant) and *T. thomasseti* (Muir).

KEY TO GENERA OF *Delphacidae* IN SAINT HELENA

- 1. Post-tibial spur narrow, awl-shaped, with 6 to 9 large widely-spaced teeth **Ilburnia**
— Post-tibial spur foliaceous, with many minute teeth 2
- 2. Vertex appreciably longer than broad; a white or pale band from vertex to mesoscutellum 3
— Vertex not longer than broad; no longitudinal pale band dorsally (in St. Helena species) **Toya**
- 3. Head in profile with vertex meeting frons abruptly at an acute angle ... **Matutinus**
— Head in profile with vertex subangulately curving into frons **Sogatella**

Gen. **Ilburnia** White

Ilburnia White, 1878, Proc. zool. Soc. Lond., 1878, p. 471, subgen. n. of *Liburnia*.

Ilburina [sic], Scudder, 1882, Nomenclator Zoologicus, Suppl. List, p. 172.

Ilburina [sic], Scudder, 1882, Nomenclator Zoologicus, Univ. Index, p. 160.

Ilburnia, Muir, 1915, Canad. Ent., 47, p. 267.

Ilburnia, Muir, 1919, Canad. Ent., 51, p. 6.

Ilburnia, Muir, 1919, Proc. Hawaii ent. Soc., 4, p. 48.

Ilburnia, Muir, 1921, Proc. Hawaii ent. Soc., 4, p. 507.

Ilburnia, Giffard, 1922, Proc. Hawaii ent. Soc., 5, p. 107.

- Ilburnia*, Muir and Giffard, 1924, Bull. Hawaii Sug. Pl. Ass., 15, p. 7.
Ilburnia, Swezey, 1929, J. econ. Ent., 22, p. 856.
Ilburnia, Schulze, Kükenthal and Heider, Nomenclator animalium, 3 (13), p. 1669.
Ilburnia, Neave, 1939, Nomenclator Zoologicus, 2, p. 767.
Ilburnia, Fennah 1969, Acta. ent. Fenn., 26, p. 8.

Body sparsely setose. Head with eyes narrower than pronotum and rather less than half as wide as maximum width of body. Vertex distinctly longer than broad, anteriorly curving evenly downward into frons, submedian carinae continuing on to frons, but fused to form a rather broad common ridge, occipital portion of head moderately exposed; frons more than 2.3 times as long as broad, widest at about 1/3 from apex, in anterior view nearly 1.3 times apparent length of clypeus, lateral margins very shallowly convex, median carina distinctly becoming a single ridge at about level of lower margin of eyes; frontoclypeal suture distinctly impressed, rostrum surpassing post-trochanters, apical segment shorter than subapical, ocelli minute or absent, antennae stout, cylindrical, attaining or surpassing apex of clypeus. Pronotum strongly tricarinate in middle portion, lateral carinae straight, diverging caudad, attaining posterior margin, lateral fields with a carina between eye and base of tegmen; mesonotum strongly tricarinate. Brachypterous tegmina scarcely covering fourth abdominal segment, apically truncate or rounded-truncate, venation distinct, very little reduced. Post-tibiae laterally bispinose, with spur more than half as long as basal metatarsal segment, narrow, acute, with eight to ten stout teeth. Basal metatarsal segment longer than remaining two segments combined. Pygofer very short dorsally, long ventrally, dorsal margin only weakly excavate, ventral margin not excavate. Ovipositor without a pregenital plate at base.

Type-species : *Ilburnia ignobilis* White.

This genus is allied to *Nesosydne*, which is represented by many species in the eastern Pacific, and to the West African *Afrosydne*, known only from a single species.

KEY TO SPECIES OF *Ilburnia*

- Intercarinal areas of frons not concolorous with median carina, the latter slender in its distal half; antennae with basal segment about as long as apical segment; anal segment of male with lateroapical spinose processes curved mesocaudad *ignobilis* White
- Intercarinal areas of frons concolorous with median carina, the latter becoming slender only near its apex; antennae with basal segment distinctly shorter than apical segment; anal segment of male with lateroapical spinose processes curved ventrocephalad *dianae* sp.n.

Ilburnia ignobilis White (fig. 192-196)

Liburnia (Ilburnia) ignobilis White, 1878, Proc. zool. Soc. Lond., 1878, p. 471.

Ilburnia ignobilis, Muir, 1919, Proc. Hawaii. ent. Soc., p. 48.

Vertex a little longer than broad, carinae not thickened, distinct; frons longer than broad (2.7 : 1), median carina prominent, rather thickened between eyes, slender in distal half of frons; clypeus at base a little wider than frons at apex; antennae with subapical segment slightly shorter (♂) or slightly longer (♀) than apical. Pronotum with posterior margin of median disc wider than anterior (almost 3 : 1), two or three pustules

behind eyes, a distinct carina between eye and base of tegmen, and two or three pustules near hind margin of lateral lobes. Tegmina brachypterous, longer than broad (1.6 : 1), apical and anal angles not quite equally rounded, apical margin shallowly convex.

Yellowish brown; carinae of head and thorax, antennae, pronotal pustules and pygofer lighter than ground colour, almost stramineous; intercarinal areas of frons dark castaneous, almost piceous; abdomen with third tergite fuscous laterally.

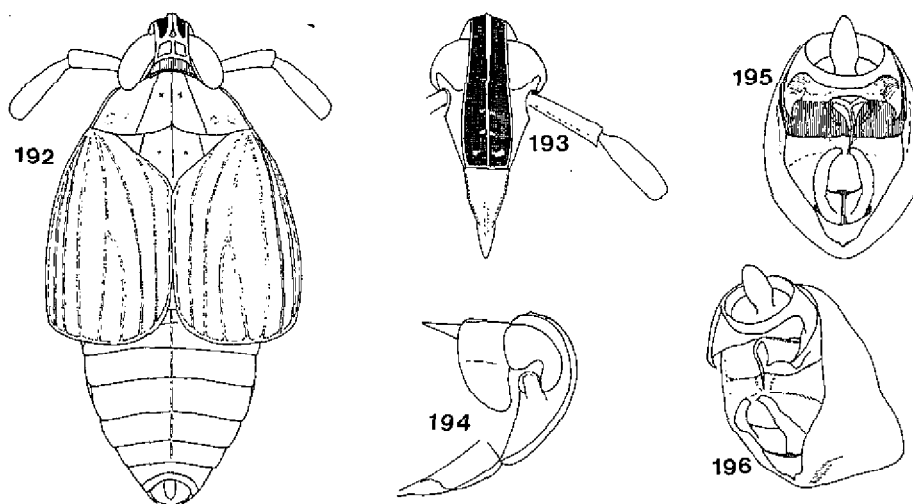


Fig. 192-196. — *Iburnia ignobilis* White, ♂. — 192. Dorsal view. — 193. Frons, clypeus and left antenna. — 194. Head, pronotum and mesonotum, right side. — 195. Male genitalia, posterior view. — 196. The same, posterolateral view from right.

Anal segment of male short, apical margin convex, lateroapical angles widely separated, each produced mesocaudad in a stout spinose process that is widely separated from apical margin, and curved more or less parallel to it. Pygofer with posterior opening longer dorsoventrally than broad, lateral margins sinuate, ventral margin U-shaped at middle, diaphragm with dorsal margin transverse, distinctly thicker than lower portion, and feebly umbonate at middle. Aedeagus short, laterally compressed, truncate apically, with upper angle produced ventrad in a rather long sinuate slender spinose process. Genital styles simple, twisted, contiguous basally, and approaching each other distally.

♂ : length, 3.3-3.6 mm.

♀ : length, 4.1-4.8 mm.

This species is known only from St. Helena.

9♂♂, 10♀♀, SAINT HELENA : High Central Ridge, 2600-2700 ft (XII.1965). High Central Ridge, 2300-2700 ft (XII.1965, II.1967). Cabbage Tree Road, 2500 ft (III.1967). High Central Ridge, 2300 ft (III.1967). Central Ridge, Replat S-E Diana's Peak, 2500 ft (III.1967). High Peak, 2400-2800 ft (II.1967). Central Ridge, between Diana's Peak and

Actaeon (V.1967). Cuckhold's Point, north side and top (H.F.D. Bartlett, III.1936). The type series in the British Museum (Nat. Hist.) consists of 3 ♀♀ (Wollaston, 1877).

All the specimens for which host data are available were collected in fern-brakes or on *Dicksonia arborescens*.

***Ilburnia diana* sp.n. (fig. 197-203)**

Vertex as long as broad (♂) or a little longer than broad (♀), about as wide apically as at base, carinae rather thickened, more or less distinct; frons longer than broad (almost 2.3 : 1), median carina prominent, thick, except near apex and evidently composed of two fused submedian carinae from base to about level of lower margin of eyes, clypeus at base a little wider than frons at apex, antennae with apical segment longer than basal segment (1.3-1.4 : 1). Pronotum with posterior margin of median disc wider than anterior margin (2.6 : 1), one or two pustules present near hind margin behind eyes, and a rather ill-defined carina on each side between eye and base of tegmen. Tegmina brachypterous, longer than broad (1.4 : 1), apical and anal angles not quite equally rounded, apical margin almost straight.

Reddish brown, sometimes almost castaneous; pronotum and mesonotum between carinae sometimes pale brown; two rows of creamy yellow spots, each with an extensive fuscous border, on abdomen dorsally, abdominal ventrites fuscous in their posterior half.

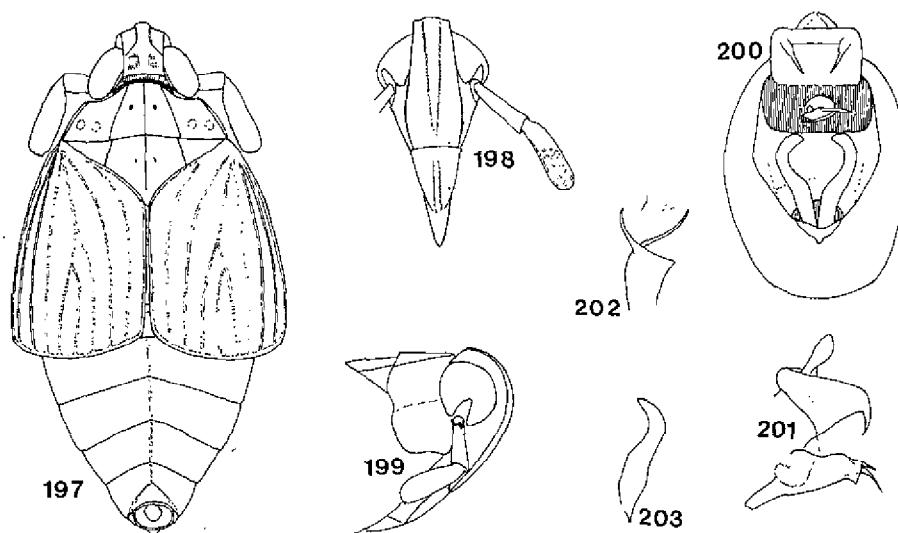


Fig. 197-203. — *Ilburnia diana* n. sp. — 197. ♀, dorsal view. — 198. Frons, clypeus and left antenna. — 199. Head, pronotum and mesonotum, right side. — 200. Male genitalia, posterior view. — 201. Anal segment and aedeagus, left side. — 202. Apex of aedeagus, dorsal view (semi-diagrammatic sketch). — 203. Genital style.

Anal segment of male short, apical margin transverse, lateroapical angles widely separated, each produced mesoventrad and cephalad in a short decurved spinose

process. Pygofer with posterior opening longer dorsoventrally than broad, lateral margins sinuate, ventral margin V-shaped at middle, diaphragm broad, with dorsal margin transverse, not distinctly thicker than remainder and a little produced caudad at middle. Aedeagus rather short, stout, with two slender spinose processes crossing each other horizontally, as figured. Genital styles moderately long, simple, shallowly S-shaped, contiguous at base and almost meeting at apex.

♂ : length, 2.4-2.7 mm.

♀ : length, 3.0-3.5 mm.

Holotype ♂, SAINT HELENA : High Peak, 2400-2600 ft (III.1967), in Musée Royal de l'Afrique Centrale. 4♂♂, 12♀♀, 2 nymphs, SAINT HELENA : High Central Ridge, 2600-2700 ft (17.XII.1965, 8.I.1966). High Central Ridge, 2300-2600 ft (II.1967, III.1967). High Peak, 2400-2800 ft (II.1967, III.1967). Teutonic Hall, near cress-bed, 1500-1800 ft (II.1967).

This species, like the preceding, was taken in fern-brake.

The occurrence of two species of the endemic genus *Ilburnia* in St. Helena, and their association with components of the original flora of the island are considered to be of major zoogeographical significance. The general similarity of the two species leaves little doubt that they have developed in the island from a common ancestral immigrant, and this would appear to have arrived a very long time ago. The original home of this ancestor does not appear to have been either Africa or South America and is not now recognisable. It would seem possible that it lay in a territory in the Austral vegetational zone that has since lost the fauna, and perhaps the flora, then present.

Gen. *Sogatella* Fennah

Chloriona (*Sogatella*) Fennah, 1956, Proc. Calif. Acad. Sci., (4), 28, p. 471.

Sogatella, Fennah, 1963, Bull. ent. Res., 54, p. 48.

Type-species : *Liburnia furcifera* Horváth.

This genus is represented in Africa and its offshore islands, in Australasia, the Pacific, U.S.A. and South America. Two species are present in St. Helena, separable as follows :

— Frons less than 2.5 times as long as broad. Tegmen of ♀ not more than 3.1 mm long
..... *kolophon* (Kirk.)

— Frons more than 2.6 times as long as broad. Tegmen of ♀ not less than 3.3 mm long
..... *nebris* Fennah

Sogatella kolophon (Kirkaldy)

Delphax kolophon Kirkaldy, 1907, Hawaii Sug. Plant. Ass. Exp. Sta. Ent. Bull. 3, p. 157.

Chloriona (*Sogatella*) *kolophon*, Fennah, 1956, Insects of Micronesia, 6, n° 3, p. 116.

Sogatella kolophon, Fennah, 1963, Bull. ent. Res., 54, p. 58.

Sogatella kolophon atlantica Fennah

Sogatella kolophon atlantica Fennah, 1963, Bull. ent. Res., 54, p. 58.

Vertex as long submedially as broad at base, basal compartment wider at base than greatest length (1.7 : 1) and than median length (2.0 : 1); frons in middle line longer than

broad at widest part (nearly 2.4 : 1), wider at apex than at base (1.3 : 1); postclypeal disc as broad at base as long in middle line; antennae with basal segment longer than broad (1.8 : 1), second segment longer than first (1.4 : 1). Post-tibial spur with about 18 teeth.

Anal segment of male short, collar-like, lateroapical angles closely approximated but separate, each produced ventrocephalad in a moderately long spinose process. Pygofer with posterior opening ovate, a little longer than broad, in profile with upper margin slightly declivous, dorsolateral angle distinctly produced caudad, not distinctly inflected mesad; diaphragm with dorsal margin moderately broadly concave, median portion with a pair of short vertical peg-like processes, the margin between them weakly sinuate; no medioventral process present.

This species is tropicopolitan.

58♂♂, 7♀♀ and 2 mutilated specimens, SAINT HELENA: Teutonic Hall, 1500-1800 ft (XI.1965, XII.1965, I.1966). Basse Fisher's Valley, Bradley Ruins, 1000 ft (XI.1965). Basse Fisher's Valley, irrigations (XII.1965). Haute Fisher's Valley, 1700 ft (XI.1965). Fisher's Valley, tête de source, 2000-2100 ft (XI.1965). Plantation House, 1700 ft (XII.1965). Peak Hill, 1400 ft (I.1966). High Peak, 2600 ft (XI.1965). Mt. Eternity, 1900 ft (XII.1965). Cason's Gate, 2100 ft (IV.1967). Sandy Bay, Blasney Bridge, 300 ft (XII.1965). Thompson's Wood, 1700-1800 ft (XI.1965). Taylor's Flat (H.F.D. Bartlett, III.1936).

This species feeds principally on grasses, but has been taken (though possibly only perching) on other hosts, including, in St. Helena, *Dicksonia arborescens* (FENNAH, 1963, p. 59).

***Sogatella nebris* Fennah**

Sogatella nebris Fennah, 1963, Bull. ent. Res., 54, p. 67.

Vertex longer submedially than broad at base (1.2 : 1), evenly rounding into frons, as wide at apex as at base, lateral margins slightly concave, apical margin truncate with submedian carinae a little prominent, Y-shaped carina feeble, submedian carinae passing separately on to frons, basal compartment of vertex wider at hind margin than greatest length (1.5 : 1), and than median length (1.7 : 1); frons in middle line longer than wide at widest part (2.5-2.6 : 1), widest in distal third, lateral margins straight and gradually diverging for three-quarters of length from base, then weakly incurved to suture, median carina forked in basal fifth, clypeus at base distinctly wider than frons at apex, postclypeal disc as long as broad at base, anteclypeus in profile strongly curved caudad, so that entire clypeus in profile is distinctly convex, antennae reaching to frontoclypeal suture, basal segment twice as long as broad, second segment twice as long as first. Pronotum with disc longer in middle line than broad at anterior margin (nearly 1.2 : 1), lateral carinae almost straight, strongly diverging basad, not nearly attaining hind margin. Total length of mesonotum longer than that of scutellum (2.5 : 1). Post-tibial spur with 19-21 teeth.

Head stramineous, disc of frons between carinae, disc of clypeus and anterior portion of genae suffused testaceous; pronotum pale stramineous, a light reddish-brown suffusion behind each eye, darker on portion overlapped by eye; mesonotum light reddish-brown with disc stramineous, apex of scutellum ivory-white, pleurites and coxae ochraceous or fuscous, legs stramineous, protarsi and mesotarsi distally tinged orange-brown; abdomen dorsally fuscous, ventrally sordid ochraceous or fuscous with posterior margin and posterolateral angles of sternites stramineous or ivory, pygofer and male genitalia fuscous, female genitalia stramineous or dull ivory-white. Tegmina

yellowish-hyaline, a broad suffusion in posterior half of membrane distad of Cu 1 fork dilute fuscous, commissural margin of clavus narrowly ivory-white.

Anal segment of male moderately short, collar-like, a pair of moderately long spinose processes arising submedially at apical margin, directed ventrad. Pygofer with posterior opening subrhomboidal, slightly longer dorsoventrally than broad, in profile with dorsolateral angles shortly acutely produced, distinctly inflected mesad, diaphragm with dorsal margin rather broadly concave, median portion lightly pigmented castaneous, with a pair of short vertical peg-like processes, the margin between them concave; a small medioventral process present on ventral margin of pygofer. Aedeagus of similar pattern to that of *S. kolophon*. Genital styles rather short, broad, each unequally bifurcate distally.

♂ (macropterous): length, 2.2 mm; tegmen, 3.0 mm.

♀ (macropterous): length, 2.7 mm; tegmen, 3.5 mm.

This species is known from South Africa.

1 ♀, SAINT HELENA: Teutonic Hall, 1600 ft (XII.1965).

Gen. *Matutinus* Distant

Matutinus Distant, 1917, Trans. Linn. Soc. Lond., Zool., 17, p. 278.

Type-species: *Matutinus opulentus* Distant.

This genus occurs in Africa south of the Sahara and in the Mascarene Is.

Matutinus sp.

2 ♀♀, SAINT HELENA: Basse Fisher's Valley, irrigations, 1000 ft (XII.1965).

These females are coelopterous, but otherwise resemble macropterous females of several African species, to one of which they will doubtless prove to belong.

Gen. *Toya* Distant

Toya Distant, 1906, Fauna of British India, 3, p. 472.

Type-species: *Toya attenuata* Distant.

This genus is of world-wide distribution.

KEY TO SPECIES OF *Toya* IN SAINT HELENA

1. Frons more than twice as long as broad, carinae fine. Pygofer of male with dorsolateral angles, if produced, not curving mesad or shallowly impressed at apex 2
- Frons not more than twice as long as broad, carinae appearing coarse. Pygofer of male with dorsolateral angles strongly produced, curving mesad and shallowly impressed at apex *propinqua*

2. Frons 2.1 times as long as broad. Pronotum concolorous with mesonotum. Pygofer of male with dorsolateral angles narrowly produced ventrad *tuberculosa*
 — Frons more than 2.2 times as long as broad. Pronotum in posterior half paler than mesonotum. Pygofer of male with dorsolateral angles not at all produced *thomasseti*

***Toya propinqua* (Fieber)**

Delphax propinqua Fieber, 1866, Ver. zool.-bot. Ges. Wien, 16, p. 525.

Liburnia propinqua, Fieber, 1872, Kat. Europäischen Cicad., p. 5.

Delphacodes propinqua, Muir, 1917, Proc. Hawaii. ent. Soc., 3, p. 335.

Toya propinqua, Fennah, 1964, Trans. R. ent. Soc. Lond., 116, p. 142.

Vertex basally a little broader than long submedially, frons twice as long as broad or a little shorter, postclypeus in profile evenly curved, ocelli small.

Lateral margins and median carina of frons broadly pale, and bordered with fuscous, thus appearing thickened. Pronotum and mesonotum stramineous.

Anal segment of male short, deeply sunken into emargination of pygofer, with a pair of long straight spines, with their bases close together, directed ventrad. Pygofer with dorsolateral angles strongly produced, incurved mesad distally, each with a shallow ovate cavity at apex; diaphragm elevated at middle of dorsal margin in a black bifurcate process. Aedeagus small, subtubular, broadest basally, straight, a few small spines subdorsally near apex, orifice terminal. Genital styles long and rather broad, flat, slightly narrowed at middle and twisted in distal half, truncate apically.

T. propinqua is of almost world-wide distribution.

19♀♀, 53♀♀, SAINT HELENA: Teutonic Hall, 1500-1800 ft (XI-XII.1965, II.1967). Lemon Tree Gut, au-dessous de Woodest, 1500 ft (V.1962). Varney's (A. Loveridge, V-VI.1961, II.1963, VI.1964). St. Helena (C. Darwin, V.1836).

***Toya tuberculosa* (Distant) comb. n.**

Liburnia tuberculosa Distant, 1916, Fauna of British India, 6, p. 145.

Delphacodes terryi Muir, 1917, Proc. Hawaii. ent. Soc., 3, p. 334.

Delphacodes varia Hesse, 1925, Ann. S. Afr. Mus., 23, p. 171, **syn. n.**

Toya tuberculosa Fennah, 1975, Ent. Scand., Suppl. 4, p. 117.

Vertex as long as broad submedially, frons longer than broad (2.1 : 1), postclypeus in profile straight in basal three-quarters, strongly curved in apical quarter; ocelli relatively large.

Lateral margins and carinae of frons narrowly pale, creamy-yellow, intercarinal areas of frons uniformly dark fuscous, pronotum stramineous, but often with a fuscous suffusion on lower half of lateral lobes, mesonotum stramineous; pygofer fuscous with dorsolateral lobes distinctly darker.

Anal segment of male short, collar-like, lateroapical angles each produced ventrad in a rather short spine. Pygofer with dorsolateral angles narrowly produced and strongly deflected in a thumb-like lobe; diaphragm with dorsal margin shallowly excavate at middle, slightly elevated at each end of excavation. Aedeagus moderately long, shallowly curved upward distad, with a row of about seven teeth obliquely across right side and an oblique row of about fourteen teeth on left side, and a few subdorsally near apex, orifice apical, oblique. Genital styles moderately long, broad basally, narrowing distad, with inner margin sinuate, slightly expanded at apex and rounded-truncate apically.

T. tuberculosa is known from Australasia, Ceylon, and Africa south of the Sahara.

31♂♂, 2♀♀, SAINT HELENA : Teutonic Hall, 1500-1800 ft (XI-XII.1965, I-IV.1967). Cason's Gate (IV.1967).

Muir (1929, Ann. Mag. nat. Hist, [10], 4, p. 220) suggested that his interpretation of *varia* Hesse was conspecific with *D. terryi* Muir. The genitalia of the material that Muir had before him, and of other specimens, have been compared by me, and have been found to agree.

***Toya thomasseti* (Muir)**

Delphacodes thomasseti Muir, 1925, Trans. ent. Soc. Lond., 1924, p. 466.

Opiconsiva modesta Distant, 1917, Trans. Linn. Soc. Lond., Zool., 17, p. 303.

Delphacodes distantii Metcalf, 1943, Gen. Cat. Hemipt., 4, pt. 3, p. 431.

Toya thomasseti, Fennah, 1964, Trans. R. ent. Soc. Lond., 116, p. 141.

Vertex as long as broad or slightly broader than long, frons longer than broad (2.2 : 1), postclypeus in profile shallowly curved, ocelli relatively large.

Lateral margins and median carina of frons narrowly tawny, only slightly paler than intercarinal areas; pronotum light yellowish brown, pallid, ashy white, in posterior half, mesonotum light yellowish brown.

Anal segment of male short, collar-like, distal margin produced ventrally in a pair of moderately long stout spines. Pygofer with dorsolateral angles not produced; diaphragm with dorsal margin strongly produced dorsad near middle line in a pair of narrow lobes, which diverge distad. Aedeagus rather short, tapering distad, with a row of about four teeth near lower margin on right, and a row of about five teeth obliquely on left side, in basal two-thirds. Genital styles moderately long, straight, tapering distad, very narrow in apical quarter and truncate at apex.

T. thomasseti is known from Africa (FENNAH, 1969, Acta. ent. fenn., 26, p. 45) and the Mascarene Islands (Muir, 1925; FENNAH, 1964).

19♂♂, 7♀♀, SAINT HELENA : Basse Fisher's Valley, 1000 ft (I.1967). Basse Fisher's Valley, irrigations, 1000 ft (XII.1965). Pleasant Valley, Silver Hill, 1700 ft (XI.1965). Sandy Bay, Blasney Bridge, 300 ft (XII.1965). Teutonic Hall, 1500-1800 ft (XI.1965). St.-Helena (C. Darwin, 1836).