

TRANSACTIONS OF THE SOCIETY FOR BRITISH ENTOMOLOGY

VOL. 16

DECEMBER 1965

PART X

A SHORT KEY TO THE BRITISH DROSOPHILIDAE (DIPTERA) INCLUDING A NEW SPECIES OF *Amiota*

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With the publication in 1954 of Mr. E. B. Basden's outstanding work on the Scottish Drosophilidae (*Trans. Roy. Soc. Edin.*, 62: Part 3 (No. 15): 603-654), it was generally felt that a key to the whole of the known British species, based on the above work, would be highly desirable. Basden's key to the Scottish species is essentially a fully descriptive one, requiring no further detailed descriptions. The present key makes full use, with some pruning, of his work in respect of the Scottish species, and my own collection, which he very kindly checked some years ago, has been mainly relied on for the incorporation of the remainder of the British species. It was Mr. Basden's firm intention in due course to publish a key to the complete British Drosophilidae himself, but he recently informed me that pressure of other work unfortunately makes it virtually impossible for him to do so in the foreseeable future. He has therefore generously suggested that my key should go into print, and the present publication is the outcome of his vetting of the original draft, resulting in some important additions and alterations in the light of his up-to-date knowledge of the family.

In 1954, Scotland contributed a total of 28 species, while the number now recognised as occurring in the British Isles amounts to 50. The present key includes two additional species of *Drosophila*, namely *polychaeta* Patterson & Wheeler and *iri* Burla*, which, although not yet recorded from the mainland of Britain, are frequently met with on ships in British ports. These 'casuals' may in time become established in Britain.

The family Drosophilidae may be briefly characterised as follows:—
Second antennal segment without trace of cleft on outer (lateral) face; costa of wing interrupted (or broken) at two places, near humeral cross-vein and close to apex of subcostal vein (V. 1); anal cell and anal vein (V. 6) always present, latter strongly developed; frons without incurved lower fronto-orbital bristles, the anterior orbital bristle proclinate and strongly developed, or when reclinate then shorter and weaker, and placed nearer to eye-margin, than the adjacent strong proclinate bristle; hind metatarsus longer than next segment and not at all dilated.

*Specimens of both sexes of these two species were kindly sent to me by Mr. Basden to enable them to be included in the key.

Key to Species

1. Arista pectinate to plumose, with at least 2 branches above and one below. 2
 — Arista bare or at most pubescent. 50.
2. Middle tibia dorsally with decumbent short hairs along whole length, without strong bristles. 3.
 — Middle tibia dorsally with a row of erect strong bristles, which at base of tibia are longer than basal diameter of tibia. 49.
3. Eyes covered with a dense short pile. Postvertical bristles well developed, much more than half the length of anterior strong orbital bristle. 4.
 — Eyes quite or practically bare. Postvertical bristles weak and inconspicuous, except in *Leucophenga* where they are barely half the length of anterior orbital. 41.
4. Eight more or less well defined rows of acrostichal hairs between the dorsocentral lines (these are best counted across thorax just in front of suture, and do not include the hairs in line with the front pair of dorsocentrals). 5.
 — Six rows of acrostichal hairs. 25.
 — Four rows of acrostichal hairs. 34.
 — Two rows of acrostichal hairs. Facial carina well developed and nose-like in profile. Only one long humeral bristle. Thorax slate-grey with a median brown stripe (= *disticha* Duda).
38. *Parascaptomyza pallida* Zett.
5. Disc of thorax completely matt, grey or yellowish-grey, with brown spots or blotches, almost every hair and bristle arising from a brown spot or brown area. Facial carina shallowly grooved along whole length. 6.
 — Disc of thorax not spotted brown, at most with more or less distinct brown stripes. Carina smooth, not grooved. 7.
6. Wing with costa darkened at second break. Front coxa dark grey inside. Front femur not darker than outside face of coxa. Palpi darkish-brown. One or more abdominal tergites with a yellowish patch near side-margins. Darker species. ♂: front tarsus short-haired
 29. *Drosophila repleta* Woll.
 — Costa not darkened. Front coxa light brown inside. Front femur greyish and usually darker than outside face of coxa. Palpi yellowish or brownish-yellow. Tergites entirely dark at side-margins. Paler species. ♂: front tarsus with hairs about as long as 2nd tarsal segment. 28. *Drosophila hydei* Sturt.
7. A dorsal preapical bristle on hind tibia only. Yellow or yellowish-brown species. 8.
 — All tibiae with a distinct dorsal preapical. 9
8. Disc of thorax matt yellow with 3 well defined narrow brown stripes, median one divided behind. Pleural area with 2-3 longitudinal brown stripes. Small species, 1.75-2 mm. 10. *Drosophila busckii* Coq
 — Thorax semi-shining, uniformly yellowish-brown, or occasionally with indistinct darker markings which may form rather broad stripes. Pleural area at most with ill-defined darker patches. Large species, 3-3.5 mm. (= *vibrissina* Duda). 21. *Drosophila confusa* Staeg

9. Stronger costal fringe extending at least five-sixths of the distance along section between radial and cubital veins. Only two distinct sternopleural bristles. Yellowish-brown to dark brown species. . . 10.
- Stronger costal fringe extending at most little more than half-way along section between radial and cubital veins. 11.
10. Thorax with three strong postsutural dorsocentral bristles, seen from in front yellowish-brown with at most a narrow median and broader lateral darker brown stripes, the lateral ones (often also the median) visible only behind suture. No distinct oral bristle in addition to vibrissa. ♂: front tibia and tarsus without conspicuous long hairs. ♀: ovipositor guide narrow with 2-3 recurved spines at tip above.
24. ***Drosophila polychaeta*** P. & W.
Only the normal two postsutural dorsocentrals and an enlarged dorsocentral hair, seen from in front darkish-brown with 3 broad brownish-black stripes which extend to extreme front margin of thorax. 1-2 strong oral bristles present in addition to vibrissa. ♂: front tarsus, and apical two-thirds of front tibia, with a conspicuous anterodorsal fringe of long hairs which are longer than greatest width of tibia. ♀: ovipositor guide very broad, square, without spines.
25. ***Drosophila iri*** Burla
11. Ground-colour of thorax greyish or blackish, though the dusting may be somewhat golden and there may be brownish stripes. 12.
- Ground-colour of thorax yellow, or light or darkish-brown. 18.
12. Three distinct sternopleural bristles, though the middle one may be shorter and weaker than the others. A pair of posterior prescutellar hairs distinctly longer and stronger than acrostichal hairs in front of them. ♂: front tarsus without sex combs. 13.
- Normally only 2 distinct strong sternopleurals. No distinctly enlarged prescutellar hairs. ♂: front tarsus with sex combs on first two segments (*obscura*-group). 14.
13. Frons reddish-yellow, velvet-black in front and laterally, with almost parallel sides, the width at front about equal to median length. All three sternopleurals strong. 8. ***Drosophila rufifrons*** Loew
- Frons almost entirely dark brownish, without trace of velvet-black markings, usually slightly wider at vertex than at front, the width at front distinctly more than median length.
7. ***Drosophila deflexa*** Duda
14. ♂: front tarsus with 2 weak combs, on metatarsus 4-7 irregularly curved teeth, on 2nd segment 3-6 regular teeth, both combs at about 45° to long axis of tarsus. ♀: ovipositor guide with 2 outstanding long bristles, one dorsal and one ventral, near tip, all spines on guide sharp-pointed; abdomen with large, somewhat triangular yellow areas on lateral anterior edges of tergites 4 to 7, largest on tergite 5.
5. ***Drosophila silvestris*** Basd.
- ♀: tarsal combs larger and stronger, the teeth of both quite regular, and at least one of the combs at an angle much less than 45°. ♀: with only one long or longish bristle on each ovipositor guide (on ventral edge near tip), some or most of the short spines blunt; abdomen without yellow areas on tergites, present only in *obscura* where they are smaller and not triangular. 15.

15. Disc of thorax unicolorous greyish-black with dark golden dusting, without stripes except in immature specimens 16.
- Thorax with the dark golden dusting interrupted by a pair of broad brownish stripes on acrostichal area. (Stripes often indistinct in dried specimens of *tristis*, which is distinguished by 2 strong palp bristles and by the obviously blackened fore part of ♂ wing). . . . 17.
16. The stronger costal fringe extending half-way, or slightly more, along section between radial and cubital veins. Front metatarsus (♂) $1\frac{1}{2}$ - $1\frac{1}{2}$, or (♀) $1\frac{1}{2}$ - $1\frac{1}{2}$, as long as 2nd segment. A darker insect than *ambigua* with costal margin of wing greyish and with only palpi, proboscis, halteres, ovipositor guide, and sometimes legs and base of frons, yellowish. ♂: genital clasper comb forming a square, or nearly so, with 5-7 black teeth, no bud-scale-like secondary clasper (median process) present; metatarsal comb with 9-14 teeth (exceptionally fewer), slightly oblique to long axis of tarsus and occupying half the length of segment; comb on 2nd segment with 8-14 teeth, usually almost parallel to axis and occupying up to three-quarters of segment; costal edge of wing slightly darkened, especially about end of radial vein. ♀: ovipositor guide broadly rounded at end, broader than hind metatarsus, with a close-set row of 6-8 very short blunt spines of uniform length at tip, a fine bristle (3 times the length of spines) on inside edge of these and arising at base of about 4th blunt spine from top, about 6 more short pointed spines spaced out along ventral edge, none on dorsal edge, an isolated short spine on the side close to tip at centre. 1. ***Drosophila subobscura*** Coll.
- Stronger costal fringe extending only $\frac{1}{2}$ to $\frac{2}{3}$ along section between radial and cubital veins. Front metatarsus (♂) often no longer than (at most less than $1\frac{1}{2}$ times as long), or (♀) usually $1\frac{1}{2}$ as long as (at most $1\frac{1}{2}$ times) 2nd segment. Wings quite clear. Somewhat more brownish species than *subobscura*, especially on frons and humeri, with legs pale yellow (rarely darkened). ♂: genital clasper comb obviously longer than wide with 7-8 teeth, the comb being inserted on inner side of the concave scale-like bluntly-pointed secondary clasper, which usually projects ventrally so that comb is hidden from the outside; tarsal combs at same angle as in *subobscura* but usually shorter, metatarsus with 7-11 teeth, 2nd segment with 6-10 teeth. ♀: ovipositor guide narrower, tip no wider than hind metatarsus, sometimes slightly upturned at end, spines finer and somewhat longer than in *subobscura*, only the 3-5 on edge at tip being stout and bluntish, the up to 10 or 11 rather hair-like ones on ventral surface sharp-pointed, one long fine bristle at lower edge of tip up to 4 times the length of spines near its base. 4. ***Drosophila ambigua*** Pom.
17. Palpi with only one strong bristle at tip beneath. ♂: wing with no blackening along foremargin; tarsal combs shorter, metatarsus with 6-10 teeth, 2nd segment with 5-9 (exceptionally 10) teeth, both combs slightly more oblique than in *tristis*. ♀: abdomen with small yellow lateral areas on anterior part of tergites 4 to 6, not always evident in dried specimens or in living autumnal-caught ones, sometimes appearing reddish-brown. (= *obscuroides* Pom.).
2. ***Drosophila obscura*** Fall.

- Palpi with 2 almost equally strong bristles on ventral edge, the stronger at tip. ♂: wing distinctly blackened along foremargin and at tip; tarsal combs long, both with 8-12 teeth and usually more nearly parallel to long axis than in *obscura*. ♀: abdomen without lateral yellow areas on tergites. 3. ***Drosophila tristis*** Fall.
18. Both crossveins more or less distinctly clouded (at least obviously darker pigmented than other veins), or if only hinder crossvein clouded then faint clouds also present at ends of some longitudinal veins. 19.
- Wings quite clear, crossveins not clouded and without distinct darker pigmentation. 22.
19. A characteristic row of about 8-11 short sharp spines on apical half of anteroventral surface of front femur. Thorax mainly uniformly light khaki-brown, matt. Ends of first three long veins, and hinder crossvein, faintly clouded. ♂: first two segments of front tarsus ventrally with dense felt-like hairs along whole length. 27. ***Drosophila immigrans*** Sturt.
- Front femur simple. Thorax yellowish-brown with a more or less distinct shine. Both crossveins distinctly clouded (or at least obviously darker pigmented), wings otherwise clear. ♂: front tarsus not as above. 20.
20. Second oral bristle distinctly more than half as long as vibrissa. Abdominal tergites 2-4 each with a pair of large, more or less triangular black spots with base on hindmargin and apex quite or almost reaching foremargin. Crossveins tending more to be only darker pigmented instead of clouded. Stronger costal fringe extending along $\frac{1}{2}$ to $\frac{3}{4}$ of section between radial and cubital veins. 18. ***Drosophila histrio*** Mg.
- 2nd oral bristle distinctly less (or at most not more) than half as long as vibrissa. Black markings on tergites 2-4 more rectangular in shape and occupying less than half the length of tergite. Crossveins, besides being darker pigmented than the other veins, almost always with distinct clouding. Stronger costal fringe extending practically half-way along section between radial and cubital veins. 21.
21. ♂: front metatarsus on apical third, and 2nd tarsal segment along whole length, with a pluriserial fringe of conspicuously longer hairs on anterior face. Jowl, vertically below eye, distinctly narrower than 3rd antennal segment. ♀: ovipositor guide, in profile, broadly rounded at tip with upper and lower margins almost parallel. 2nd oral bristle almost half the length of vibrissa. 14. ***Drosophila phalerata*** Mg.
- ♂: front tarsi simple. Jowl below eye about as broad as 3rd antennal segment. ♀: ovipositor guide more triangular, more narrowly rounded at tip and with upper and lower margins making an angle of about 30°. 2nd oral bristle distinctly less than half the length of vibrissa. 17. ***Drosophila kuntzel*** Duda

22. Larger (3-3.5 mm) light to darkish brown species. 3rd antennal segment almost twice as long as wide. Thorax not very shining, somewhat dulled by microscopic dusting. Costal index (shortest distance between 2nd costal break and end of radial vein, divided by shortest distance between ends of radial and cubital veins) 3.0-4.0. Thorax with 1-2 enlarged dorsocentral hairs in front of suture. ♂: front tarsus without sex combs. 9. ***Drosophila funebris* F.**
- Smaller (2 mm) yellowish-brown species. 3rd antennal segment at most $1\frac{1}{2}$ times as long as wide. Thorax more shining. Costal index not more than 2.8. ♂: front tarsus with one or more bristly combs. 23.
23. Costal index 1.5-1.7. Stronger costal fringe extending a little more than half-way along section between radial and cubital veins. Vibrissa and 2nd oral bristle weaker, vibrissa the larger. Jowl below eye very narrow, sometimes hardly wider than front metatarsus. Dorsal pre-apical on front tibia curved downwards at tip in ♂, straight in ♀. ♂: front metatarsus and 2nd segment anteroventrally with a series of short pale combs set somewhat obliquely.
13. ***Drosophila ananassae* Dol.**
- Costal index 2.2-2.8. Stronger costal fringe not reaching middle of section between radial and cubital veins. Vibrissa and second oral bristle both strong, of equal length and strength. Jowl at narrowest part distinctly wider than front metatarsus. ♂: preapical on front tibia shorter and hardly curved; front metatarsus with only one simple anterodorsal sex comb of 9-12 closely adpressed black teeth set obliquely towards tip, 2nd segment simple. 24.
24. Jowl below eye at least as broad as (usually broader than) widest part of front tibia. Stronger costal fringe often not extending along more than $\frac{1}{2}$ of section between radial and cubital veins. ♂: genitalia with a rather inconspicuous brown scale-like broad hooked posterior process, resembling a blunt *Rosa* thorn. ♀: palpi usually with 3 distinctly stronger bristles towards tip beneath.
11. ***Drosophila melanogaster* Mg.**
- Jowl below eye narrower, barely as broad as widest part of front tibia. Stronger costal fringe extending along $\frac{1}{2}$ to $\frac{3}{4}$ of section between radial and cubital veins. ♂: posterior genital process larger and conspicuous, broadly hood-like, pointed anteriorly, resembling a section through uppermost sepal of Monkshood (*Aconitum*). ♀: palpi usually with only 2 stronger bristles towards tip beneath.
12. ***Drosophila simulans* Sturt.**
25. Very small (1.25-2 mm) blackish-brown species. 26.
- Somewhat larger (2-4 mm) yellow or yellowish-brown species. 27.
26. Frons reddish-yellow, velvet-black in front and laterally, with almost parallel sides, width at front about equal to median length. A pair of prescutellar hairs distinctly stronger than acrostichal hairs in front of them. 3 strong sternopleural bristles. ♂: front tarsus without sex combs. 8. ***Drosophila rufifrons* Loew**
- Frons more or less uniformly dark brown, distinctly wider at vertex than in front, width at front distinctly greater than median length.

- No distinct stronger precutellar hairs. Only 2 strong sternopleurals. ♂: front metatarsus with a comb of 3 bristles at apex. ♀: front metatarsus with a comb of 2 bristles at apex. 6 **Drosophila helvetica** Burla
27. Thorax with a pair of well developed presutural acrostichal bristles placed rather close together. 19. **Drosophila testacea** v. Ros.
- No bristles distinguishable from normal acrostichal hairs in front of suture. 28.
28. Wings quite clear, no veins clouded. 29.
- At least hinder crossvein more or less distinctly clouded. 30.
29. Arista with only one branch below, just behind apical fork. 2nd oral bristle less than $\frac{1}{4}$ the length of vibrissa. Facial carina not centrally grooved, at widest point hardly half as wide as 3rd antennal segment. Abdomen brown with yellow median stripe and narrowish yellow foremargins to tergites. Wing with cubital and discal veins parallel or slightly converging. Pleural area greyish, not striped. 20. **Drosophila cameraria** Hal.
- Arista with 2-3 branches below. 2nd oral bristle almost half as long as vibrissa. Facial carina almost as wide as 3rd antennal segment, shallowly grooved down middle. Abdomen yellow with paired dark triangular markings at least on tergites 2-4. Cubital and discal veins distinctly diverging. Pleural area yellow with 2 brown stripes (= *macularis* Villen). 26. **Drosophila picta** Staeg.
30. Only hinder crossvein distinctly clouded. Frons dark brown to blackish. Facial carina usually shallowly grooved, very broad, at widest part distinctly wider than 3rd antennal segment. Abdomen unicolorous dark brown. 22. **Drosophila littoralis** Mg.
- Both crossveins distinctly clouded. Frons yellow or brownish-yellow. Carina smooth, not grooved, usually not broader than 3rd antennal segment. Abdomen mainly yellow (sometimes darkened in dried specimens) with well defined blackish markings. 31.
31. Thorax yellow with an indistinct greyish median stripe, and a pair of distinct dark brown lateral stripes just within the acrostichal region. Only hairs below vibrissa. 23. **Drosophila unimaculata** Strob.
- Thorax at most very indistinctly striped. A 2nd oral bristle quite distinct, $\frac{1}{4}$ or more the length of vibrissa. 5th abdominal tergite of ♂ almost entirely, of ♀ at least partly, undusted and glossy. 32.
32. Jowl below eye hardly as broad as 3rd antennal segment. 2nd oral bristle barely half as long as vibrissa. Wings with crossveins rather faintly clouded. ♂: front metatarsus on apical third, and 2nd segment along whole length, with a pluriserial fringe of conspicuously longer hairs on anterior face. ♀: ovipositor guides broader, quite as broad as deepest part of hind tibia. 14. **Drosophila phalerata** Mg.
- Jowl below eye distinctly broader than 3rd antennal segment. 2nd oral bristle quite half as long as vibrissa, usually more than half as long. Crossveins more strongly clouded. ♂: front tarsus without a pluriserial fringe, at most with a row of well-spaced hairs. ♀: ovipositor guides narrower than deepest part of hind tibia. 33.

33. Thorax more yellow. Abdominal tergites yellow with 4 well-defined black hindmarginal spots, which, in the ♂, are often connected by a narrow hindmarginal band. Eye pile short and dense. ♂: front tarsus with an anterodorsal row of well-spaced hairs which are not much longer than tarsus is wide. 15. **Drosophila transversa** Fall.
- Thorax more brownish. Tergites brownish-yellow with black hindmarginal bands of uniform width on to ventral surface of tergites, but broadly interrupted at middle dorsally. Eyes with only scattered pile. ♂: anterodorsal hairs on front tarsus almost twice as long as tarsus is wide. 16. **Drosophila limbata** v. Ros.
34. The anterior of the 3 strong sternopleural bristles shorter than middle one. Arista, on lower side, with 2-3 branches behind apical fork, one of these being on basal half. ♂: front metatarsus with a tuft of long pale hairs at apex, a less conspicuous tuft on 2nd segment. (s.g. *Lordiphosa*). 35.
- Sternopleurals normal, middle one the shortest. Arista with only a single branch below, immediately behind apical fork. ♂: front tarsus uniformly short-haired. (*Scaptomyza*). 37.
35. Upper humeral bristle quite distinctly shorter and weaker than lower. Palpi almost entirely dark. Smaller species, about 2 mm. ♂: abdomen more extensively yellow, entirely so ventrally; genital arch (tergite 7) small and pubescent. 32. **Drosophila acuminata** Coll.
- Upper humeral bristle almost or quite as long as lower. Palpi more extensively yellow, in ♂ at most slightly darkened at tip, in ♀ always considerably yellow on basal half. Somewhat larger species, about 2.5 mm. ♂: abdomen more extensively darkened, ventral surface at least partly so; genital arch large, glossy, usually pubescent only at lowest edge. 36.
36. ♂: genital lamellae (claspers) large, almost trapezoidal in profile, at broadest part more than $1\frac{1}{2}$ times as broad as hind femur, without a projecting 'heel' at base. ♀: ovipositor guides more narrowly rounded at tip, blackish, concave on outer surface, with the smaller spines on edge all of uniform size; anal tuft long.
31. **Drosophila fenestrarum** Fall.
- ♂: genital lamellae much narrower, especially in apical half, with a more or less triangular projection ('heel') at base. ♀: ovipositor guides more broadly rounded at tip, usually yellow but sometimes darkened, not concave except at the 'beaded' edge, with longer spines on edge, the lower basal one or two distinctly stronger than the rest; anal tuft normal, short (= *forcipata* Coll.).
30. **Drosophila andalusica** Strob.
37. A distinct facial carina (as usual more conspicuous in ♀). Hind trochanters beneath with a short black almost spine-like bristle, instead of the usual setulose hairs. A reddish-brown species. ♂: anal cerci hairy on basal half but almost bare on apical half, with a slight indentation between. 35. **Scaptomyza trochanterata** Coll.
- At most only a slight facial ridge. Only setulose hairs on hind trochanters. Grey or yellow species. ♂: anal cerci hairy all over. . . 38.

38. A very small (or minute) bristle present on frontal orbits between upper reclinate orbital and inner vertical bristle, or if absent then species uniformly yellow or yellowish-grey. Apical scutellar bristles long, extending rearwards quite as far as lateral bristles. 39.
- Frontal orbits without this small bristle, and species either dark or with dark stripes on thorax. Apical scutellars shorter, not reaching to tips of lateral bristles. 40.
39. Cheeks wide, shortest distance between eye-margin and the small peristomal bristles (outside the oral bristles) greater than width of front tibia at apex. Head, including ocellar triangle, predominantly yellow with only a patch between ocelli grey, any grey on occiput descending only about half-way down eye. Lighter-coloured species, entirely yellow, yellowish-grey, or grey. ♂: anal cerci shorter, barely projecting below sternites in dried specimens. ♀: ovipositor guides stouter, uniformly broad to the truncated tip (= *apicalis* Hardy = *flaveola* Mg. auct. n. syn.).
33. *Scaptomyza flava* Fall.
- Cheeks narrower, shortest distance between eye-margin and small peristomal bristles usually less than width of front tibia at apex. Head more extensively grey, ocellar triangle always grey and occiput down to lower eye-margin. Thorax and abdomen always darkish grey. ♂: anal cerci longer, projecting below sternites. ♀: ovipositor guides less robust, narrower. 37. *Scaptomyza montana* Wheel.
40. Lighter grey species with conspicuous dark stripes on thorax. Jowl below eye narrower, hardly as wide as 3rd antennal segment. Clypeus and proboscis yellowish in both sexes.
34. *Scaptomyza graminum* Fall.
- Darker species (especially ♀) without or with only indistinct stripes on thorax. Jowl below eye at least as wide as 3rd antennal segment. Femora often darkened. ♂: anal cerci inconspicuous, entirely hairy and smaller than in any other species of *Scaptomyza*. ♀: proboscis and tip of palpi usually darkened; median line of face less darkened than in *graminum*, but 3rd antennal segment blacker.
36. *Scaptomyza griseola* Zett.
41. Second basal cell separated from discal cell by a dark-pigmented cross-vein. 42.
- Second basal cell confluent with discal cell, at most only faint traces of a crossvein present. 46.
42. Face without a pure white cross-band above mouthedge, at most with a whitish area about central carina. Disc of thorax grey with numerous dark brown stripes and spots. Abdomen yellow with irregular black markings on hindmargins of tergites. Tibiae yellow with 3 blackish rings, without distinct preapical bristle.
48. *Phortica variegata* Fall.
- A pure white broad cross-band normally present immediately above mouthedge, contrasting strongly with rest of face. Thorax and abdomen unicolorous blackish or reddish-brown, humerus and petero-pleuron each with a large pure white spot. Tibiae either black or yellow, a dorsal preapical bristle present at least on hind tibia. 43.

43. Frons and thorax reddish-brown. Arista long-haired both above and below on middle third. Legs yellow. 46. *Amiota leucostoma* Loew
 — Thorax black, frons usually black, at least blackish-brown. 44.
44. Legs dark with white hairs. Larger species, 3.5-4 mm. ♂: hind tibia, anteroventrally along whole length, with short stiff hairs in more than one row; hind femur, posteriorly at extreme base, with a distinct broad rounded swelling. 45. *Amiota albilabris* Roth in Zett.
 — Legs yellow, or if darkened then ♂ hind tibia with a single subapical row of about 7 long outstanding bristles. ♂: hind femur without a rounded swelling at base. 45.
45. Arista with the hairs below considerably shorter than those above. Legs sometimes darkened in northern specimens. Oral white band broad, (♂) as broad as, or (♀) only little narrower than, 3rd antennal segment. ♂: hind tibia beneath with a simple row of about 7 erect fine bristles, which are yellow in yellow-legged specimens; hind femur, posteroventrally at about basal fourth, usually with a small tubercle. ♀: cerci only slightly broader than hind metatarsus, normally haired. 44. *Amiota alboguttata* Wahlb.
 — Arista with the hairs quite, or practically, as long below as above. Legs yellow. Oral white band narrower, (♂) about two-thirds, or (♀) half, the width of 3rd antennal segment. ♂: hind tibia, along almost whole length beneath, with sub-erect short fine bristles in irregular rows; hind femur simple. ♀: cerci quite twice as broad as hind metatarsus, conspicuously bushy. 47. *Amiota basdeni* sp.n.
46. Anterior reclinate fronto-orbital bristle placed close behind the proclinate one, separated from it by only about 3-4 times its own thickness. Frons only very slightly wider at vertex than at front margin, side-margins almost parallel. Prescutellar pair of bristles as long and strong as anterior pair of dorsocentrals. ♂: thorax entirely covered with a silvery gloss. Large species, 3.75-4.5 mm. 49. *Leucophenga maculata* Duf.
 — Anterior reclinate orbital well separated from proclinate one. Side-margins of frons distinctly divergent towards rear. Prescutellars short and fine, much shorter and weaker than anterior dorsocentrals. Smaller species. 47.
47. Frons grey, at most narrowly reddish in front. Thorax and scutellum dull blackish-grey, at most humeri and parts of pleural area more or less reddish. Front legs black. Wings not whitish-tinged at tip, and with costal and humeral cells smoky-blackened. 39. *Chymomyza costata* Zett.
 — Frons reddish- or yellowish-brown. Thorax and scutellum brownish-yellow. Front legs brownish, at most the femur partly black. Wings with a small whitish patch at tip (often best seen with naked eye) and a small faint grey cloud at end of radial vein, costal and humeral cells clear, brownish but not blackened. 48.
48. Wing distinctly darkened beyond end of radial vein, stronger costal fringe extending along less than $\frac{1}{3}$ of section between radial and cubital veins. ♂: front coxa with long silky hairs on inside face; genitalia with hinder (upper) lamellae long and narrow, 4 times as long as wide,

and with hairs about 3 times as long as its width; front (lower) genital process resembling a tooth-brush, short-haired ventrally, dorsally with no long bristle. (= *distincta* Egg. of Oldenb., auct. nec Egg.)

40. **Chymomyza fuscimana** Zett.

Not as above. (= *fuscimana* Zett. of Duda nec Zett.)

41. **Chymomyza distincta** Egg

49. Head only slightly deeper than long. Long diameter of eye making an angle of about 45° with a line joining neck to front of frons. Frons shining, the proclinate fronto-orbital bristle placed at or in front of middle. (= *Stegana* auct.)

50. **Stegana coleoptrata** Scop.*

Head almost twice as deep as long. Long diameter of eye about at right-angles to a line joining neck to front of frons. Frons matt, the proclinate fronto-orbital behind middle. (= *Prostegana curvipennis* Fall.)

51. **Stegana furta** L.*

50. Ocellar bristles absent. Frontalia bare.

52. **Acletoxenus formosus** Loew

Ocellar bristles present. Frontalia with some small setulae.

51. Frons entirely grey. 3rd antennal segment 11-14 times as long as wide. Thorax with greyish dusting. Tibiae without distinct dorsal preapical bristle. Costa extending only to end of cubital vein.

42. **Cacoxenus indagator** Loew

Frons velvet-black, grey only on ocellar triangle and orbits. 3rd antennal segment not longer than wide. Thorax with brownish dusting. Tibiae (at least hind and usually middle) with a dorsal preapical. Costa extending almost to end of discal vein.

43. **Cacoxenus exiguus** Duda*Amiota basdeni* sp.n. ♂, ♀

A species closely allied to *subtusradiata* Duda, but differing mainly in having a conspicuously narrower white cross-band above mouthedge.

Frons dark brown to blackish, at vertex slightly less than half head-width, rather strongly narrowing towards front in ♂, only moderately in ♀; basal antennal segments yellow, 3rd segment darkish brown in ♀, extensively yellowish in ♂, arista plumose with 5 branches above the 3-4 below; palpi and proboscis yellowish, former somewhat darkened around margin towards tip; face dark brown with, immediately above mouthedge, a pure white cross-band which is distinctly narrower than 3rd antennal segment, clypeus prominent and black; 2nd oral bristle about half the length of vibrissa; occiput black, jowls more or less broadly yellowish. Thorax and scutellum black, faintly dulled by microscopic dusting and with the normal large white spot on humerus and pteropleuron, pleural areas also with some diffused yellowish markings; prealar bristle as long as (♂), or somewhat shorter than (♀), hinder notopleural bristle; 2 pairs of postsutural dorsocentrals and a pair of well developed prescutellars, acrostichal hairs in 12-14 irregular rows. Abdomen black, somewhat less

*In June 1960 *Proc. Ent. Soc. Wash.*, 62: 109 Wheeler showed that *Stegana* and *Prostegana* had the same type species, and were therefore synonymous. He thus erected the genus *Stegana* for *coleoptrata* Scop., retaining *Stegana* for *curvipennis* Fall. = *furta* L.

shining than thorax, usually with a faint reddish tinge on sides of tergites 2-4, sternites all yellow; ♀ cerci conspicuously broad and hairy. Legs, including coxae and trochanters, entirely yellow, a dorsal preapical bristle present on all tibiae. Wings with the strong costal fringe extending along about $\frac{2}{3}$ of the section between radial and cubital veins.

Length 2.5-3 mm.

A. basdeni has been taken by Mr. J. E. Collin at Chippenham Fen (Cambs.), and my own specimens are from Woolwich Wood, Woolage Green (E. Kent).

HOLOTYPE ♂, E. Kent: Woolwich Wood, Woolage Green, 31.vii.57 (author) [in author's coll.].

PARATYPES: all same locality as holotype; ♀, 30.vii.56; ♀, 31.vii.57; ♂, ♀, 3.viii.57 (author) [in author's coll.]

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and with hairs about 3 times as long as its width; front (lower) genita. process resembling a tooth-brush, short-haired ventrally, dorsally with no long bristle (= *distincta* Egg. of Oldenb. auctt. nec Egg.).

40. **Chymomyza fuscimana** Zett.

— Not as above (= *fuscimana* Zett. of Duda nec Zett.).

41. **Chymomyza distincta** Egg.

49. Head only slightly deeper than long. Long diameter of eye making an angle of about 45° with a line joining neck to front of frons. Frons shining, the proclinate fronto-orbital bristle placed at, or in front of, middle (= *Stegana* auctt.).
50. **Steganina coleoprata** Scop.*

*In June 1900 (*Proc. Ent. Soc. Wash.*, 62: 109) Wheeler showed that *Stegana* and *Prostegana* had the same type species, and were therefore synonymous. He thus erected the genus *Steganina* for *coleoptera* Scop., retaining *Stegana* for *curtipennis* Fall. — *ibid.* 1.

50. Ocellar bristles absent. Frontalia bare.

52. **Acletoxenus formosus** Loew

— Ocellar bristles present. Frontalia with some small setulae.

51.

51. Frons entirely grey. 3rd antennal segment 14-1½ times as long as wide. Thorax with greyish dusting. Tibiae without distinct dorsal preapical bristle. Costa extending only to end of cubital vein.

42. **Cacoxenus indagator** Loew

— Frons velvet-black, grey only on ocellar triangle and orbits. 3rd antennal segment not longer than wide. Thorax with brownish dusting. Tibiae (at least hind and usually middle) with a dorsal preapical. Costa extending almost to end of discal vein.

43. **Cacoxenus exiguus** Duda

Amiota basdeni sp.n. ♀

A species closely allied to *subtusradiata* Duda, but differing mainly in having a conspicuously narrower white cross-band above mouthedge.

♀. — Frons dark brown to blackish, at vertex slightly less than half head-width, rather strongly narrowing towards front in ♂, only moderately in ♀; basal antennal segments yellow, 3rd segment darkish brown in ♂, extensively yellowish in ♀, arista plumose with 5 branches above and 3-4 below; palpi and proboscis yellowish, former somewhat darkened around margin towards tip; face dark brown with, immediately above mouthedge, a pure white cross-band which is distinctly narrower than 3rd antennal segment, clypeus prominent and black; 2nd oral bristle about half the length of vibrissa; occiput black, jowls more or less broadly yellowish. Thorax and scutellum black, faintly dulled by microscopic dusting and with the normal large white spot on humeri and pteropleuron, pleural areas also with some diffused yellowish markings; prealar bristle as long as (♂), or somewhat shorter than (♀), hinder notopleural bristle; 2 pairs of postsutural dorsocentrals and a pair of well developed prescutellars, acrostichal hairs in 12-14 irregular rows. Abdomen black, somewhat less shining than thorax, usually with a faint reddish tinge on sides of tergites 2-4, sternites all yellow; cerci conspicuously broad and hairy. Legs, including coxae and trochanters, entirely yellow, a dorsal preapical bristle present on all tibiae. Wings with the strong costal

tringe extending along about $\frac{1}{3}$ of the section between radial and cubital veins. Length 2.5-3 mm.

A. basdeni has been taken by Mr. J. E. Collin at Chippenham Fen (Cams.), and my own specimens are from Woolwich Wood, Woolage Green (E. Kent).

HOLOTYPE ♂, E. KENT: Woolwich Wood, Woolage Green, 31.vii.57 (author) [in author's coll.].

PARATYPES: all same locality as holotype; ♀, 30.vii.56; ♀, 31.vii.57; ♀, 3.viii.57 (author) [in author's coll.].

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