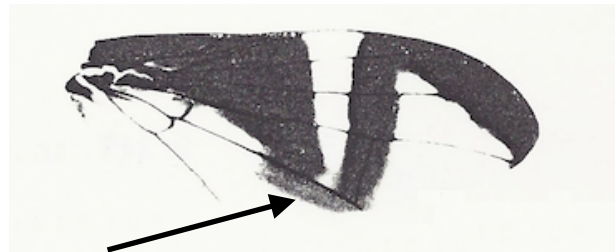


**Key to Palaearctic *Rivellia* Robineau-Desvoidy, 1830 (Diptera, Platystomatidae)**

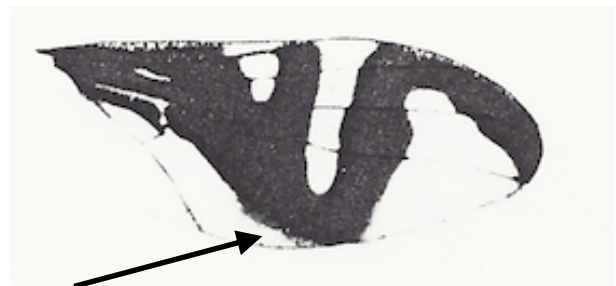
- 1. Wings with distinct brown transverse bands..... **2**
- Wings without brown transverse bands ..... **10**
  
- 2. Discal median dark brown transverse band joined on anterior margin with apical marginal band (thereby forming a distinctive inverted V-shape) and on posterior margin of wing at  $M_4$  with the furthest extent of basal mark..... **3**
- Wing membrane basad of *r-m* not entirely dark brown, but including some hyaline areas; discal median transverse brown band not forming a distinctive inverted V-shape at apex of wing, if joining apical marginal band, then only narrowly so ..... **5**

- 3. Wing membrane entirely dark brown basad of *r-m* and anterior to *br*.....  
 ..... ***R. manschurica* Hennig, 1945**  
 China, Korea, FE Russia



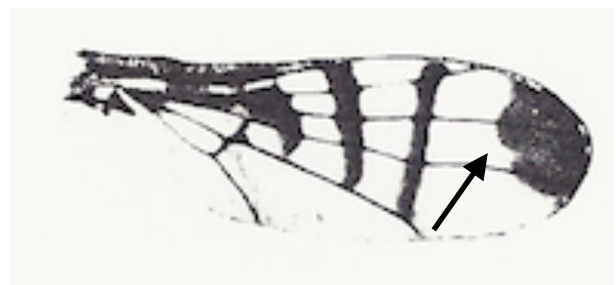
- Brown basal area of wing interrupted by a hyaline wedge at the pterostigma extending as far as  $R_{4+5}$  adjacent to *r-m*..... **4**

- 4. Hyaline basal mark in *bm* longer than crossvein *bm-m* .....  
 ..... ***R. sphenisca* Hendel, 1933**  
 China



- Hyaline basal mark in *bm* terminates before crossvein *bm-m* ("maybe = *sphenisca*!" Hennig, 1945).....  
 ..... ***R. alini* Enderlein, 1937**  
 China

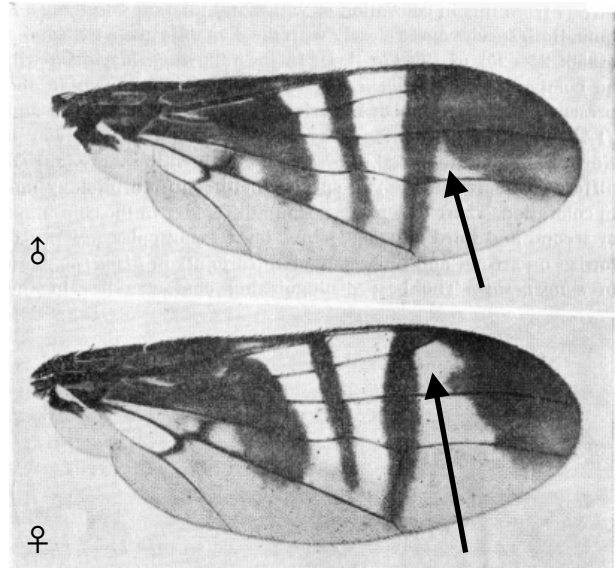
- 5. Apex of wing marked by a striking large brown isolated spot covering apical third of  $r_{2+3}$  and  $r_{4+5}$  .....  
 ... ***R. syngenesiae* (Fabricius, 1781)**  
 widespread Europe and Russia



- Apex of wing marked by a narrow apical marginal brown band, either isolated and narrow (length of *r-m* or narrower), or if broader, then joined to discal median

transverse brown band..... 6

- 6. Apical marginal brown band broadly joined to discal median transverse brown band in male such that most of apex of  $r_{2+3}$  and  $r_{4+5}$  are filled with brown; less so in females such that apical third of  $r_{2+3}$  and  $r_{4+5}$  are filled with brown ..... ***R. hispanica* Lyneborg, 1969**  
Spain



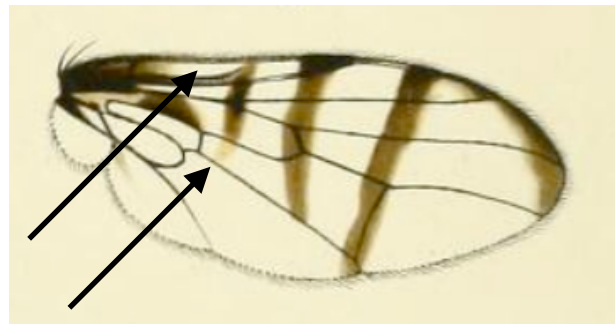
- Sexual dimorphism not observed, apical marginal brown band narrowly meeting origin of discal median transverse brown band, or isolated at apex ..... 7

7. Head and thorax red-brown (dark red-brown or red-yellow) ..... 8

- Head and thorax black with green or blue metallic lustre ..... 9

- 8. Forehead wider than one eye, 1.5 times as long as wide, marks at vertex more or less extensive glossy black; katepisternum shiny black ....  
..... ***R. scutellaris* Hendel, 1933**  
China

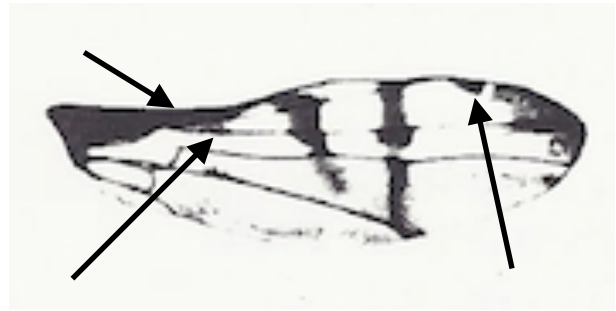
- Small brown spot from apex of *sc* extends beyond *RS* node into *dm*, basad to which costa cell is hyaline; forehead hardly as wide as an eye, more than 1.5 times as long as wide. The edge of the plate and the star opleurs are not shiny black, but red like the rest of the thorax .....  
..... ***R. basilaris* (Wiedemann, 1830)**  
widespread Sri Lanka to Samoa and Japan



9. Radial median and discal median transverse brown bands present across wing membrane ..... 10

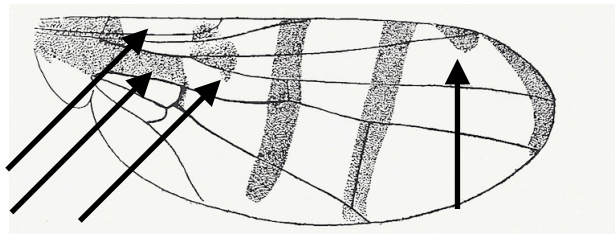
- Wing membrane hyaline, lacking transverse brown bands, having only a marginal brown band along costal margin ..... 12

10. Small brown spot from apex of sc hardly noticeable, at most developed no further than *RS* node, basad to which costa cell is brown; *br* hyaline for the most part; small isolated spot present between origin of discal median transverse brown band and apical marginal brown band.....  
 .... ***R. charbinensis* Enderlein, 1937**  
 China, FE Russia

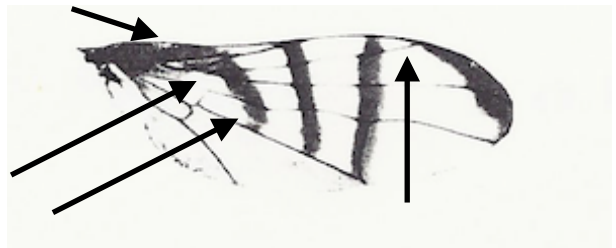


- Small brown spot from apex of sc hardly developed beyond *RS*, if hardly so, then basal half of *br* is brown ..... **11**

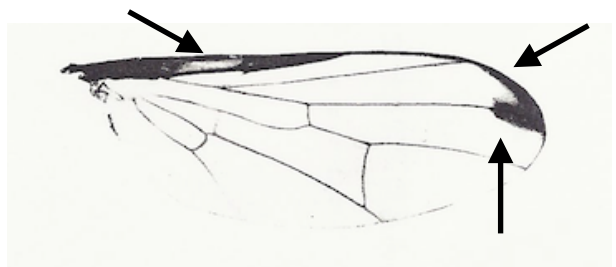
11. Small brown spot from apex of sc developed a little beyond *RS*, basad to which costa cell is hyaline; basal half of *br* is brown; small isolated spot present between origin of discal median transverse brown band and apical marginal brown band .....  
 ..... ***R. basalaroides* Hendel, 1933**  
 China



- Small brown spot from apex of sc terminating in *dm*, basad to which costa cell is brown; basal half of *br* is hyaline; no small isolated spot between origin of discal median transverse brown band and apical marginal brown band .....  
 ..... ***R. asiatica* Hennig, 1945**  
 China, Korea

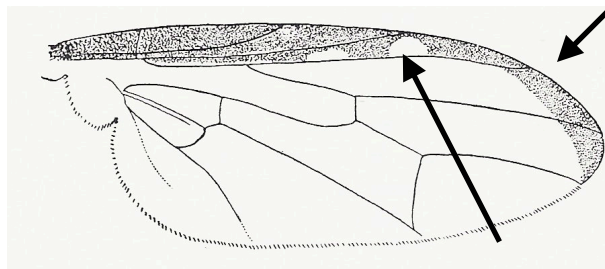


12. Wing apex with thin apical marginal brown band supplemented by a small brown spot across apex of *R*<sub>4+5</sub>; pterostigma partially hyaline; legs dark-brown to black; haltere brown with whitish-yellow knob .....  
 ..... ***R. depicta* Hennig, 1945**  
 China, Korea



- Wing apex lacking a small brown spot in addition to apical marginal brown band; pterostigma partially hyaline or brown; legs yellow; haltere entirely brown ..... **13**

13. Costal margin of wing brown for entire length to  $M_1$ , interrupted by a rounded hyaline mark at apex of  $R_1$ .  
 .....***R. marginalis* Hendel, 1931**  
 Egypt



- Wing membrane hyaline excepting narrow apical spot across apex of  $R_{4+5}$  touching  $M_1$  but not quite touching  $R_{2+3}$  ..... **14**
14. Brown apical margin of the wing is weakly margined; first flagellomere apically pointed, brown; anepisternum with white-grey pruinescence .....  
 ..... ***R. apicalis* Hendel, 1934**  
 China, Korea
- Brown apical margin of the wing is sharp, almost linearly delimited; first flagellomere apically rounded, red-brown; anepisternum for the most part shining .....  
 ..... ***R. cladis* Hendel, 1914**  
 China, Japan

## References

- Byun, H. W., & Han, H. Y. 2004. Revised key and phylogenetic analysis of Korean *Rivellia* (Diptera: Platystomatidae), with redescriptions of two little known species. *Entomological Research*, **34**(2), 83-90.
- Hendel, F. 1914a. Diptera Fam. Muscaridae Subfam. Platystominae. *Genera Insectorum* **157**: 1 - 179. [precedence over Hendel, 1914b according to date: see McAlpine, D.K., 1994: 118 - 119].
- Hendel, F., 1914b. Die Arten der Platystominen. -- Abhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien **8**(1): 1-409.
- Hendel, F. 1931. Neue aegyptische Dipteren aus der Gruppe der acalyptraten Musciden gesammelt von Prof. Efflatoun Bey. *Bulletin Societe Entomologique d'Égypte* (n.s.) **15**: 59 - 73.
- Hendel, F. 1933. Neue acalyptrate Musciden aus der paläarktischen Region.(Dipt.). *Berliner entomologische Zeitschrift*, 1933(1), 39-56.
- Hendel, F. 1934. Schwedisch-chinesische wissenschaftliche Expedition nach den nordwestlichen Provinzen Chinas, unter Leitung von Dr. Sven Hedin und Prof. Sü Ping-chang. Insekten ges. v. schwed. Arzt der Expedition Dr. David Hummel 1927-1930. 13. Diptera. 5. Muscaria holom. *Arkiv för zoologi* **25A** (21): 1-18.
- Hennig, W. 1945. [Chapter] 48. Platystomatidae. In: Lindner, E. ed, *Die Fliegen der palaearktischen Region*, Vol. **5**. Stuttgart, E. Schweizerbart'sche Verlagsbuchhandlung, pp.1-62.
- Lyneborg, L. 1969. Some Micropezidae, Psilidae, platystomidae, otitidae, pallopteridae, Odiniidae, Aulacigasteridae, Asteiidae and Milichiidae (Diptera) collected in southern Spain, with descriptions of six new species. *Entomologiske meddelelser* **37**: 27-38

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Wing sketches: van der Wulp 1898, Hendel, 1914 and Namba, 1956.