

# A small collection of calypterate Diptera (Tachinidae, Sarcophagidae, Calliphoridae, Muscidae) from the Dovre mountains, Southern Norway

KNUT ROGNES

Rognes, K. 1982. A small collection of calypterate Diptera (Tachinidae, Sarcophagidae, Calliphoridae, Muscidae) from the Dovre mountains, Southern Norway. *Fauna norv. Ser. B.* 29, 110–114.

Data on 23 species of calypterate Diptera collected at Kongsvoll, Southern Norway, during the summer 1980 are given. *Onychogonia cervini* (Bigot, 1881) (Tachinidae) is reported as new to Scandinavia; *Pollenia intermedia* Macquart, 1835, *Protocalliphora chrysorrhoea* (Meigen, 1826) and *Protocalliphora nuortevai* Grunin, 1972 (Calliphoridae) as new to Norway. Some features of the *P. nuortevai* males and females are described.

Knut Rognes, Stavanger lærerhøgskole, Postboks 2521 Ullandhaug, N-4001 Stavanger, Norway.

During the summer 1980 John O. Solem at The Royal Norwegian Society of Sciences, The Museum, (DKNVS-Museet), Trondheim, ran four Malaise-traps at three localities at Kongsvoll (Sør-Trøndelag: STI: Oppdal), in the Dovre mountains. The traps were placed across small streams primarily to collect aquatic insects. Parts of the captured material, which was conserved in ethanol, was sorted out by Lita Greve Jensen, Museum of Zoology, Bergen, and sent to me for identification. I have pinned and treated it according to a procedure described by Herting (1961), and it is now deposited\* at DKNVS-Museet, Trondheim, with duplicates in my own collection. The results of the examination are presented below.

The localities (all in EIS 79) are: (1) Blesbekken, 1100 m a.s.l., subalpine birch forest, UTM: 32V-NQ 32.07; (2) Raubekken 900 m a.s.l., subalpine birch forest, UTM: 32V-NQ 31.08; (3) Raubekken 1200 m a.s.l., lower alpine zone, UTM: 32V-NQ 32.07. All localities lie in the lower parts of the western slopes of the mountain S. Knutshø, east of Kongsvoll.

Identifications mostly follow the works of Lundbeck (1927), Séguy (1928, 1941), Mesnil (1944–1975), Hall (1948), Emden (1954), Hennig (1955–1964) and Zumpt (1956). Other works used are cited separately for the species concerned. Benno Herting, Ludwigsburg, has verified my identification of the tachinids. The nomenclature and sequence of treated species largely follow Crosskey and Pont in Kloet &

Hincks (1975). Otherwise the presentation follows Rognes (1981). Species marked with an asterisk have not been previously recorded from Norway.

## Family Tachinidae

*Trichopareia grandicornis* (Zetterstedt, 1849).

Previous records: *Tachina laticornis* Zetterstedt, 1838: 637; Zetterstedt 1844: 1071; *Tachina grandicornis* Zett. — Siebke 1877: 83; *Degeeria grandicornis* Zett. — Bidentkap 1901: 56; *Admontia grandicornis* Zett. — Ringdahl 1952: 136–137 No. 112.

Material: Raubekken 900 m 1 ♀ 9 Oct.

*Allophorocera ferruginea* (Meigen, 1824).

Taxonomy and previous records: Wood 1974; Rognes 1981: 109 (as *Erycilla ferruginea*).

Material: Raubekken 900 m 1 ♀ 31 July.

\**Onychogonia cervini* (Bigot, 1881).

Taxonomy: Mesnil 1956: 540 (as *flaviceps*); Herting 1973: 7; Mesnil 1975: 1395.

Material: Raubekken 1200 m 1 ♂ 10 July.

The terminalia have been dissected (G.pr. 46) and agree with the description given by Herting (*l.c.*). For comparative purposes I have also dissected a male *Onychogonia flaviceps* (Zetterstedt, 1838) (the specimen cited in Rognes 1981: 109).

Zoogeographically this is an interesting capture. *O. cervini* Bigot has been known from rather few specimens from the Alps only, among which two that have been bred from *Orodemnias cervini* (Fallou) (Lep.: Arctiidae), the only known host (Herting 1973: 7–8). The above record is the first one from Scandinavia and *cervini* Bigot consequently the second known Palaearctic *Onychogonia* species with boreo-alpine distribution. Most in-

terestingly, the lepidopterous host species has also just recently been captured in Scandinavia for the first time (Sweden: Torne Lappmark, Nissuntjärro, altitude 700–1400 m) (Torstenius 1971, Palmqvist 1981, cf. also Hellberg 1981). Even though the locality is far north of the Dovre mountains, a search for *Orodemnius cervini* there might be successful.

*Onychogonia flaviceps* (Zetterstedt, 1838).

Taxonomy and previous records: See Rognes 1981: 109–110.

Material: Raubekken 1200 m 1 ♂ 7 Aug.

#### Family Sarcophagidae

*Sarcophaga frenata* Pandellé, 1896.

Previous records: *Sarcophaga frenata* Pand. — Ringdahl 1944a: 80; Ringdahl 1944c: 8; Ringdahl 1952: 146–147 No. 294.

Material: Raubekken 900 m 1 ♀ 3 July.

#### Family Calliphoridae

*Calliphora alpina* (Zetterstedt, 1838).

Taxonomy: Ringdahl 1931: 172.

Previous records: *Sarcophaga alpina* Zett. — Zetterstedt 1845: 1305; Siebke 1877: 95; *Acrophaga alpina* Zett. — Ringdahl 1944a: 80; Ringdahl 1952: 148–149 No. 353; *Steringomyia alpina* Zett. — Ringdahl 1944c: 7; *Calliphora alpina* Zett. — Zumpt 1956: 16.

Material: Blesbekken 1100 m 2 ♀ ♀ 19 June, 1 ♀ 21 Aug.; Raubekken 900 m 1 ♂ 10 July, 1 ♂ 1 ♀ 31 July; Raubekken 1200 m 1 ♀ 10 July, 1 ♀ 31 July, 1 ♀ 14 Aug.

*Calliphora loewi* Enderlein, 1903.

Previous records: *Calliphora loewi* End. — Nuorteva & Vesikari 1966: 545.

Material: Blesbekken 1100 m 2 ♀ ♀ 24 July, 1 ♂ 31 July.

*Calliphora uralensis* Villeneuve, 1922.

Previous records: *Calliphora uralensis* Vill. — Soot-Ryen 1925: 141–142; Lundbeck 1927: 150; Ringdahl 1944a: 80; Ringdahl 1944c: 6; Ringdahl 1952: 148–149 No. 358; Nuorteva & Vesikari 1966: 545; *Calliphora uralense* Villen. — Davies 1954: 72.

Material: Raubekken 900 m 1 ♀ 24 July

*Calliphora vomitoria* (L.).

Previous records: *Musca vomitoria* L. — Siebke 1877: 98; *Calliphora vomitoria* L. — Bidentkap 1892: 238; Bidentkap 1901: 60; Soot-Ryen 1925: 141; Ringdahl 1944a: 80; Ringdahl 1944c: 6; Ringdahl 1952: 148–149 No. 356; Davies 1954: 72; Brinkmann 1976: 326.

Material: Raubekken 900 m 1 ♀ 14 Aug., 1 ♂ 9 Oct.

*Bellardia agilis* (Meigen, 1826).

Taxonomy: Schumann 1973; Schumann 1974.

Previous records: *Onesia agilis* Meig. — Ringdahl 1944a: 80; Ringdahl 1944c: 6; Ringdahl 1952: 148–149 No. 365.

Material: Raubekken 900 m 2 ♂ ♂ 26 June, 2 ♂ ♂ 3 July, 1 ♂ 10 July.

The genitalia of one specimen have been dissected (G. pr. 38).

*Cynomyia mortuorum* (L.).

Previous records: *Sarcophaga mortuorum* L. — Zetterstedt 1838: 650–651; Zetterstedt 1845: 1303; Siebke 1877: 95; *Cynomyia mortuorum* L. — Bidentkap 1901: 58; Strand 1903: 7; Soot-Ryen 1925: 141; Ringdahl 1944a: 80; Ringdahl 1944c: 7; Ringdahl 1952: 148–149 No. 355; Nuorteva & Vesikari 1966: 545.

Material: Raubekken 900 m 2 ♀ ♀ 19 June, 1 ♀ 3 July.

*Pseudonesia puberula* (Zetterstedt, 1838).

Previous records: *Musca puberula* Zetterstedt 1838: 654 (data of syntypes: Troms: TRY: Tromsø, Tromsø 1 ♂ 1 ♀ 24 July 1821); *Dexia puberula* Zetterstedt 1844: 1276; Siebke 1877: 93; Bidentkap 1901: 54; *Pseudonesia pubicornis* Zett. — Ringdahl 1944c: 7; Ringdahl 1952: 148–149 No. 368; Ringdahl 1954: 49.

Material: Raubekken 1200 m 1 ♀ 31 July.

\**Pollenia intermedia* Macquart, 1835.

Taxonomy: Mihályi 1976.

Material: Raubekken 900 m 1 ♂ 21 Aug. First Norwegian record.

*Pollenia rudis* (Fabricius, 1786).

Taxonomy: Mihályi 1976.

Previous records: *Musca rudis* Fabr. — Siebke 1877: 99; Strand 1900: 70; *Pollenia rudis* Fabr. — Strand 1903: 7; Strand 1906: 102; Strand 1913: 324; Bidentkap 1892: 238; Bidentkap 1901: 61; Ringdahl 1944a: 80; Ringdahl 1944c: 5; Ringdahl 1952: 148–149 No. 337.

Material: Raubekken 900 m 1 ♂ 9 Oct.

*Protophormia terraenovae* (Robineau-Desvoidy, 1830).

Taxonomy: Sabrosky 1956.

Previous records: *Musca groenlandica* Zetterstedt 1838: 657; Zetterstedt 1845: 1330; Siebke 1877: 98; *Phormia groenlandica* Zett. — Soot-Ryen 1925: 145; Ringdahl 1944a: 80; *Phormia terraenovae* R.-D. — Ringdahl 1944c: 5; Nuorteva & Vesikari 1966: 545; *Protophormia azurea* Fall. — Ringdahl 1952: 148–149 No. 342; *Protophormia terrae-novae* R.-D. — Davies 1954: 72.

Material: Raubekken 900 m 1 ♂ 10 July, 1 ♂ 1 ♀ 7 Aug., 1 ♀ 28 Aug. 1 ♂ 1 ♀ 4 Sept., 1 ♀ 9 Oct.

\**Protocalliphora chrysorrhoea* (Meigen, 1826).

Taxonomy: Peus 1960.

Material: Raubekken 900 m 1 ♂ 7 Aug., 1 ♂ 4 Sept.

The terminalia of one specimen have been dissected (G. pr. 34). Previously known from Austria, W. Germany (Aachen, Dachau) (Peus 1960) and Finland (Nuorteva 1960, Nuorteva & Järvinen 1961, Grunin & Nuorteva 1969). According to current opinion the larvae are obligatory blood-suckers of *Riparia riparia* L. nestlings. First Norwegian record.

\**Protocalliphora nuortevai* Grunin, 1972.

Taxonomy: Grunin 1972.

Material: Blesbekken 1100 m 3 ♂♂ 1 ♀ 12 June, 3 ♀♀ 19 June, 2 ♀♀ 26 June, 1 ♂ 17 July, 1 ♂ 24 July, 1 ♂ 1 ♀ 31 July, 1 ♂ 21 Aug.; Raubekken 900 m 2 ♀♀ 19 June, 1 ♀ 24 July, 2 ♀♀ 31 July, 2 ♂♂ 7 Aug., 1 ♂ 2 ♀♀ 21 Aug.; Raubekken 1200 m 1 ♂ 10 July, 1 ♂ 24 July. A total of 12 ♂♂ and 14 ♀♀.

The terminalia of 6 males have been dissected (G. pr. 31, 32, 33, 35, 36, 37) and they agree with Grunin's (1972) figures. I have also compared the material with most of the type material (holotype male, 3 male and 6 female paratypes in Zoological Museum, University of Helsinki, Finland). I have not seen the 3 male and 1 female paratypes in Zoological Institute, Academy of Sciences, Leningrad, USSR. Previously the species is known only from Northern Finland (Lapponia enontekiensis: Enontekiö, Kilpisjärvi; Lapponia inarensis: Utsjoki, Karigasniemi), close to the Norwegian border. As host for the larvae are known *Turdus iliacus* L., *Calcarius lapponicus* L. and *Phylloscopus trochilus* L. (Grunin 1972).

Below are given some descriptive notes on the Norwegian specimens, since they are the only ones to have been captured in the wild (the Finnish type material was bred from larvae or puparia), and also a few data on the Finnish material examined.

Both sexes: Apical third or more of second antennal segment (sometimes the whole segment), often basal part of third segment posteriorly, and vibrissal corner with red colour. Third antennal segment short. Peristomal part of gena not broad, subocular part smooth, without rugae. Palpi yellow. *Prst acr* 3 (4), *post acr* 3—4 (5), *prst dc* 3 (4), *post dc* 3 (4), sometimes asymmetrically developed (Finnish material: *prst acr* 3, *post acr* 3—6, *prst dc* 3—4, *post dc* 3—4). Postalar declivity almost always with a few short hairs at middle. Haltere with whitish yellow knob and yellow stalk. Squamae pure white. Basicosta brown to blackish brown, never as dark as epaulet, usually with lighter shade apically.

Males: Frons at narrowest point 0.100—0.137 times head width (mean 0.118, n = 11) (Grunin gives 0.104—0.152, mean 0.128, n = 4, for the males in the type series); frons at narrowest point 1.259—1.545 times distance between outer rims of posterior ocelli (mean 1.422, n = 12) (2 measurable Finnish males give 1.818, 1.810). Parafacialia and parafrontalia most often pure white dusted, sometimes with additional weak bluish or yellowish sheen; parafacialia with weak undulations; parafrontalia relatively broad, usually at least two thirds outside the inclinate frontal setae, with a single row of setulae outside the frontal setae.

Females: Width of frons at vertex 0.284—0.317 times head width (mean 0.299, n = 13) (Finnish females: 0.293—0.330, mean 0.315, n = 6).

Width of frons at vertex 0.864—1.000 times distance between anterior ocellus and lunula (mean 0.932, n = 13) (Finnish females 0.878—1.000, mean 0.955, n = 6). Width of frons at vertex 0.487—0.570 times greatest diameter of eye (not in profile view of head) (mean 0.526, n = 13) (Finnish females: 0.500—0.550, mean 0.530, n = 5). Interfrontal stripe 0.469—0.554 times total width of frons (both at level of anterior orbital setae) (mean 0.508, n = 13) (Finnish females: 0.481—0.556, mean 0.513, n = 6). Area between prevertical, outer vertical and inner vertical setae polished black in all specimens except 3 which are dusted in this region. The Finnish females are apparently dusted in this region also, although their heads are rather dirty. Parafrontalia matt brown or greyish brown dusted; parafacialia glistening brown with a slight golden sheen; parafacialia with distinct rugae, at level of base of second antennal segment a very pronounced deep ruga, which in certain lights appears as a black transverse broad band or spot. Interfrontal stripe black as seen from above, brownish dusted as seen from in front, usually becoming narrower forwards, with a row of short hairs on each side («interorbitalborsten» of Peus 1960: 197, Abb. 1). The number of proclinate orbital setae 1—4, most have 2 on each side. The Finnish females have 2 or 3; one specimen has 3 on each side, three specimens have 2 on each side, the remaining two specimens are asymmetric in this respect.

#### Family Muscidae

##### *Mesembrina mystacea* (L.).

Previous records: *Mesembrina mystacea* L. — Zetterstedt 1838: 651; Zetterstedt 1845: 1342; Zetterstedt 1849: 3273; Siebke 1877: 99; Bidentkap 1892: 237; Bidentkap 1901: 61; Strand 1903: 6; *Hypodermodes mystacea* L. — Ringdahl 1928: 9; Ringdahl 1944b: 83; Ringdahl 1944c: 12; Forslund 1951: 201; Ringdahl 1952: 150—151 No. 383.

Material: Raubekken 1200 m 1 ♂ 10 July.

##### *Eudasyphora cyanicolor* (Zetterstedt, 1845).

Taxonomy and previous records: Cuny 1980; Rognes 1979.

Material: Raubekken 900 m 1 ♂ 14 Aug.

##### *Orthellia cornicina* (Fabricius, 1781).

Taxonomy: Hennig 1963: 930 (as *caesarion*); Michelsen 1977; Michelsen 1979.

Previous records: *Musca cornicina* Fabr. — Zetterstedt 1838: 655; *Lucilia cornicina* Fabr. — Siebke 1877: 97 (in part; cf. Rognes 1982: 40); Bidentkap 1892: 238; Strand 1900: 70; Bidentkap 1901: 59; *Pseudopyrellia cornicina* Fabr. — Strand 1903: 7; *Pseudopyrellia fennica* Frey — Strand 1913: 324; *Cryptolucilia caesarion* Meig. — Ringdahl 1928: 8; *Orthellia caesarion* Meig. — Ringdahl 1944b: 83; Ringdahl 1944c: 12; Ringdahl 1952: 150—151 No. 373; Ardö 1957: 148.

Material: Raubekken 900 m 1 ♀ 17 July, 1 ♀ 31 July; Raubekken 1200 m 1 ♂ 31 Aug.  
*Morellia hortorum* (Fallén, 1816).  
 Previous records: *Musca hortorum* Fall. — Zetterstedt 1838: 660; *Cyrtoneura hortorum* Fall. — Siebke 1877: 99; Bidentkap 1892: 239; Strand 1900: 70; Bidentkap 1901: 62; *Muscina (Cycloneum) hortorum* Fall. — Strand 1906: 102; *Morellia hortorum* Fall. — Ringdahl 1928: 7; Ringdahl 1944b: 83; Ringdahl 1944c: 13; Ringdahl 1952: 150—151 No. 380.  
 Material: Raubekken 900 m 1 ♀ 17 July; Raubekken 1200 m 1 ♀ 31 July.  
*Myospila mediatubunda* (Fabricius, 1781).  
 Taxonomy: Gregor 1968; Pont 1970.  
 Previous records: *Cyrtoneura mediatubunda* Fabr. — Siebke 1877: 100; *Myospila mediatubunda* Fabr. — Bidentkap 1901: 62; *Myospila mediatubunda* Fabr. — Ringdahl 1928: 10; Ringdahl 1944b: 84; Ringdahl 1944c: 18; Ringdahl 1952: 158—159 No. 573.  
 Material: Blesbekken 1100 m 1 ♀ 17 July; Raubekken 900 m 1 ♀ 14 Aug., 1 ♂ 1 ♀ 28 Aug.  
*Haematobosca stimulans* (Meigen, 1824).  
 Previous records: *Stomoxys stimulans* Meig. — Siebke 1877: 80; *Haematobia stimulans* Meig. — Ringdahl 1928: 10; Ringdahl 1944b: 83; Ringdahl 1944c: 13; Ringdahl 1952: 150—151 No. 394; Ardö 1957: 149.  
 Material: Blesbekken 1100 m 1 ♂ 19 June.

#### ACKNOWLEDGEMENTS

I warmly thank B. Herting, Ludwigsburg, for most kindly having examined the tachinids; T. Lund, Stavanger, for information on European arctids; B. Lindeberg, Helsinki, for the loan of material; and finally Lita Greve Jensen, Bergen, and John O. Solem, Trondheim, for having given me the opportunity of studying this valuable collection.

#### REFERENCES

Ardö, P. 1957. Studies in the marine shore dune ecosystem with special reference to the dipterous fauna. *Opusc. ent. Suppl.* 14, 1—255.  
 Bidentkap, O. 1892. Undersøgelser over Diptera Brachycera i Jarlsberg og Laurvigs amt sommeren 1891. *Ent. Tidsskr.* 13, 225—246.  
 — 1901. Foreløbig oversigt over de i det arktiske Norge hidtil bemærkede Diptera Brachycera. *Tromsø Mus. Aarsh.* 23 (1900), 13—112.  
 Brinkmann, A. jr. 1976. Blowfly myiasis of sheep in Norway. *Norw. J. Zool* 24, 325—330.  
 Cuny, R. 1980. Revision of the genus *Eudasyphora* Townsend (Diptera: Muscidae), and reflections on its evolution. *Can. Ent.* 112, 345—373.  
 Davies, L. 1954. Some Diptera collected at Holandsfjord, Norway. *Norsk ent. Tidsskr.* 9, 71—72.  
 Emden, F.I. van 1954. Diptera Cyclorrhapha Calyptrata (I). Section (a) Tachinidae and Calliphoridae. *Handbk. Ident. Br. Insects* 10 (4) (a), 1—133.

Forsslund, K.-H. 1951. Insektfynd på fjället Härjehåga. *Norsk ent. Tidsskr.* 8, 196—202.  
 Gregor, F. 1968. Die europäischen Arten der Gattung *Myospila* Rond. (Dipt., Muscidae). *Acta ent. bohemoslov.* 65, 299—318.  
 Grunin, K.J. 1972. Beschreibung einer ornithoparasitischen Fliege, *Protocalliphora nuortevai* Grunin, sp. n. (Dipt., Calliphoridae) aus Nord-Finland. *Ann. ent. fenn.* 38, 156—158.  
 Grunin, K.J. & Nuorteva, P. 1969. The occurrence of the ornithoparasitic *Protocalliphora* species (Dipt., Calliphoridae) in Finland. *Ann. ent. fenn.* 35, 57—58.  
 Hall, D.G. 1948. *The blowflies of North America*. The Thomas Say Foundation.  
 Hellberg, H. 1981. Nordisk igelkottspinnare, *Acerbia alpina*, funnen i Sverige. *Ent. Tidsskr.* 102, 75—76.  
 Hennig, W. 1955—1964. 63b. Muscidae. — In: Lindner, E. (ed.), *Die Fliegen der Palaearktischen Region* 7 (2), 1—1110.  
 Herting, B. 1961. Präparation der entomophagen Dipteren. *Entomophaga* 6, 115—116.  
 — 1973. Beiträge zur Kenntnis der europäischen Raupenfliegen (Dipt. Tachinidae). XIII. *Stuttg. Beitr. Naturk. (A)* 254, 1—18.  
 Kloet, G.S. & Hincks, W.D. (eds.) 1975. A check list of British insects. Second edition. Part 5: Diptera and Siphonaptera. *Handbk. Ident. Br. Insects* 9 (5), 1—139.  
 Lundbeck, W. 1927. *Diptera Danica. Part VII. Platypezidae, Tachinidae*. G.E.C. Gad, Copenhagen.  
 Mesnil, L.P. 1944—1975. 64g. Larvaevorinae. — In: Lindner, E. (ed.), *Die Fliegen der Palaearktischen Region* 10, 1—1435.  
 Michelsen, V. 1977. Oversigt over Danmarks Muscidae (Diptera). *Ent. Meddr.* 45, 109—163.  
 — 1979. Notes on the identity and type-material of the Anthomyiidae, Fanniidae, and Muscidae (Diptera) described by J.Ç. Fabricius. *Steenstrupia* 5, 181—196. L C  
 Mihályi, F. 1976. Contribution to the knowledge of the genus *Pollenia* R.-D. (Diptera: Calliphoridae). *Acta zool. Acad. scient. Hung.* 22, 327—333.  
 Nuorteva, P. 1960. *Protocalliphora chrysorrhoea* (Meig.) karpäsen toukat törmäpääskyn loisina. *Ornis fenn.* 37, 122—124.  
 Nuorteva, P. & Järvinen, U. 1961. The insect fauna of the nests of sand martin (*Riparia riparia* L.) in Finland. *Ann. ent. fenn.* 27, 197—204.  
 Nuorteva, P. & Vesikari, T. 1966. The synanthropy of blowflies (Diptera, Calliphoridae) on the coast of the Arctic ocean. *Ann. Med. exp. Fenn.* 44, 544—548.  
 Palmqvist, G. 1981. Intressanta fynd av Macrolepidoptera i Sverige 1980. *Ent. Tidsskr.* 102, 99—104.  
 Peus, F. 1960. Zur Kenntnis der ornithoparasitischen Phormiinen (Diptera, Calliphoridae). *Dtsch. ent. Z. N.F.* 7, 193—235.  
 Pont, A.C. 1970. *Myospila hennigi* Gregor and Povolny, 1959 (Dipt., Muscidae), new to Britain,

- and notes on the European species of *Myospila* Rondani, 1856. *Entomologist's mon. Mag.* 106, 111—113.
- Ringdahl, O. 1928. Beiträge zur Kenntnis der Anthomyidenfauna des nördlichen Norwegens. *Tromsø Mus. Aarsh.* 49 (1926) (3), 1—60.
- 1931. Einige Mitteilungen über lappländische Dipteren. *Ent. Tidskr.* 52, 171—174.
- 1944a. Revision av Vilhelm Storms Diptersamling I. Familjen Tachinidae. *K. norske Vidensk. Selsk. Forh.* 17 (19), 79—81.
- 1944b. Revision av Vilhelm Storms Diptersamling 2. Familjen Muscidae. *K. norske Vidensk. Selsk. Forh.* 17 (20), 82—85.
- 1944c. Contributions to the knowledge of the tachinids and muscids of Norway. *Tromsø Mus. Aarsh.* 65 (1942), (4), 1—27.
- 1952. Catalogus Insectorum Sueciae XI Diptera cyclorapha: Muscaria Schizometopa. *Opusc. ent.* 17, 129—186.
- 1954. Nya fundorter för norska Diptera. *Norsk ent. Tidsskr.* 9, 46—54.
- Rognes, K. 1979. Revision of the Norwegian material of the genus *Dasyphora* Robineau-Desvoidy (Diptera, Muscidae) with new records of species and localities. *Fauna norv. Ser. B.* 26, 49—58.
- 1981. Recent records of Tachinidae and Rhinophoridae (Dipt.) from Norway. *Fauna norv. Ser. B.* 28, 102—114.
- 1982. Some interesting captures of Muscidae (Dipt.) from Norway. *Fauna norv. Ser. B.* 29, 40—44.
- Sabrosky, C. W. 1956. The nomenclature of *Protophthora* (Diptera: Calliphoridae). *Proc. R. ent. Soc. Lond. (B)*, 25, 175—179.
- Schumann, H. 1973. Bemerkungen zum Status der Gattungen *Onesia*, *Melinda* und *Bellardia* (Diptera, Calliphoridae). *Mitt. Zool. Mus. Berlin* 49, 333—344.
- 1974. Revision der palaearktischen *Bellardia*-Arten (Diptera, Calliphoridae). *Dtsch. ent. Z. N.F.* 21, 231—299.
- Séguy, E. 1928. Études sur les mouches parasites. Tome I Conopides, Oestrides et Calliphorines de l'Europe occidentale. Recherches sur la morphologie et la distribution géographique des Diptères à larves parasites. *Encycl. ent. (A)* 9, 1—251.
- 1941. Études sur les mouches parasites. Tome II Calliphorides. Calliphorines (suite), Sarcophagines et Rhinophorines de l'Europe occidentale et méridionale. Recherches sur la morphologie et la distribution géographique des Diptères à larves parasites. *Encycl. ent. (A)* 21, 1—436.
- Siebke, H. 1877. *Enumeratio Insectorum Norvegicorum Fasciculum IV. Catalogum Dipteriorum Continentem.* A.W. Brøgger, Christiania.
- Soot-Ryen, T. 1925. g) Makkflueundersøkelsene. *Aarsberetn. vedk. Norges Fiskerier 1925:* 140—150.
- Strand, E. 1900. Bidrag til Hallingdals og Lyngørs insektfauna. *Nyt. Mag. Naturvid.* 37, 46—72.
- 1903. Norske lokaliteter for Diptera. *Christiania Vidensk. Selsk. Forh.* 1900 (3), 1—11.
- 1906. Nye bidrag til Norges hymenopter- og dipterfauna. III. Nye norske lokaliteter for Diptera. *Nyt. Mag. Naturvid.* 44, 102—104.
- 1913. Neue Beiträge zur Arthropodenfauna Norwegens. XVIII. Weiteres über von mir gesammelte Diptera. *Nyt. Mag. Naturvid.* 51, 323—329.
- Torstenius, S. 1971. *Orodemnias cervini* Fallou ssp. *fridolini* n.ssp. (Lepidoptera, Arctiidae). *Ent. Tidskr.* 92, 173—177.
- Wood, D.M. 1974. Notes on *Allophorocera* with a description of a new species (Diptera: Tachinidae) from Finland. *Can. Ent.* 106, 667—671.
- Zetterstedt, J.W. 1838. *Insecta Lapponica. Sectio Tertia. Diptera.* Lipsiae.
- 1844. *Diptera Scandinaviae disposita et descripta.* 3, 895—1280. Lundae.
- 1845. *Diptera Scandinaviae disposita et descripta.* 4, 1281—1738. Lundae.
- 1849. *Diptera Scandinavia disposita et descripta.* 8, 2935—3366. Lundae.
- Zumpt, F. 1956. 64i. Calliphorinae. — In: Lindner, E. (ed.), *Die Fliegen der Palaearktischen Region 11*, 1—140.

Received 9 Feb. 1982.