

SUMMER RECORDS OF SYRPHIDAE (DIPTERA) FROM SICILY, WITH FIELD NOTES AND DESCRIPTIONS OF NEW SPECIES

by

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In July 1961 a trip was made to Sicily, with the main object to collect insects. Collecting was mainly done in two localities, which will be more extensively dealt with below. Descriptions of four new species of Syrphid flies, and descriptive notes and records of other species will be given after the field observations.

FIELD OBSERVATIONS

(1) The southeastern slope of Mount Etna, 1400-2950 m. We captured our material from 50 m below the Albergo Etna upwards in a *Castanea* forest, in the region around Rifugio Filiciusa in pine forest, and around both ends of the Funicolare Etna. In the field the going was difficult, especially in old lavastreams, due to loose lava rock of all sizes and in all positions. Even 100 year old lavastreams (1860) had scanty vegetation. The region was very dry. The only water we found was in the closed well of Rifugio Filiciusa where many social Hymenoptera sucked spilled water, and in two small open cement tanks at the upper end of Funicolare Etna. A very good method for the capture of flies was discovered by accident. We observed during our meals that many flies (Syrphidae and Bombyliidae) were attracted by our transparent shiny plastic foil and evidently by mistake took it for water. The folds in the plastic glittered in the sunlight like ripples. The flies landed on the edge or near it and then walked towards it and tried to drink. Especially specimens of the *Eristalis* group hovered over it in number. Later on we deliberately used it as bait with much success. This method, of course, will only do in dry regions. We had no success in our second locality near a lake in the mountains. When dulled by lava dust our plastic lost its attraction. Dull plastic did not work. Everyone who chases Syrphid flies knows they have keen vision, but apparently not only so for flowers and moving objects. Already on several

occasions I observed that Syrphid flies are inclined to land on wrist watches glittering in the sun. The same explanation as for the above mentioned case will probably do.

In the building at the upper end of the Funicolare Etna, on about 2950 m, we found a real invasion going on of *Eristalis tenax* L. and *Scaeva albomaculata* Macq. Scores flew in through the door opening and tried to leave through the windows. Many dead specimens were found on the window frames. In the field we saw many specimens of the above mentioned species, but only one specimen of another species (*Eristalodes taeniops* Wied.). There was, on the slope near the building, only one tuft of plants, the rest of the bottom being lava waste, so the big numbers could not be explained on the ground of rich reproduction or nourishment facilities. In a neighbouring shed we saw specimens of both species entering crevices in the walls. With the help of a forceps we could obtain as many specimens as we wanted. In each crevice, however, there was only one species: *E. tenax* or *S. albomaculata*. The flies so extracted were stiff and only after some time were able to fly although the temperature (about noon) was reasonably high (at least 20° C in the shadow). Our explanation of this peculiar phenomenon is that the flies of only two species migrated from lower altitudes, where many more species occurred, to high altitudes or perhaps passed through over the mountain (3274 m). Perhaps aestivation is responsible for the concealed specimens in the crevices. We saw also specimens hovering and landing near natural hollows among the stones. In Holland *E. tenax* (♀♀ only) hibernates in crevices near the entrance of caves, not in the caves, also in houses on the ceilings etc. *S. albomaculata*, on our continent, is restricted to Southern Europe and it is a well known species from higher altitudes, e.g., Sierra Nevada. There is one odd record from Sussex, England, supporting the migration theory. Transport of puparia or larvae seems not very probable.

On Mount Etna Syrphid flies were not abundant. Nevertheless we found in the forest below Albergo Etna a new species of *Eumerus*, flying rapidly to and fro on the leaves of *Castanea*. Thanks to the steep slope we could capture it high above ground "level". Other *Eumerus* species occurring there were *E. amoenus* Lw. flying low among herbage in the sun, under the trees, and females of a species related to *E. barbarus* Coqueb., but with the hind femora less thickened. I do not describe the species because in my opinion, it is not advisable to describe species of this genus on female specimens only. Females are much less characteristic than males. Moreover there is still the possibility that our specimens are conspecific with *E. iris* Lw., described from Sicily, and currently considered a synonym of *E.*

barbarus Coqueb. The males must be studied before a conclusion may be reached.

(2) Monti Nebrodici, from Lago Biviere upwards to the summit of Monte Soro, 1250-1850 m. This biotope is quite different from (1). There are two lakes: a larger one and a small muddy one just below the summit of Monte Soro. The larger lake, Lago Biviere, had open water, marshy parts, and there was, on the southeastern end, a brooklet with water over some distance. Beginning just above the lake there were beech forests with a.o. *Cyclamen*. In this region there are summer thunderstorms and occasionally it rains the whole day. As could be expected there were a number of species of flies dependent on a humid biotope, for example *Orthoneura nobilis* Fall., *Chrysogaster solstitialis* Fall., *Liogaster splendida* Mg., *Neoscasia podagrica* F., *Platycheirus fulviventris* Macq. and *Eristalinus sepulchralis* L. The *Cinxia* species (*C. lappona* L. and *silentis* Harr.), present in Calabria (Sila), could not be found. There were, on the slopes, no humid patches with dripping water among moss cushions, necessary for the larvae of *Arctophila*. The two species of this genus, *A. bombiformis* Fall. and *A. fulva* Harr., are present in Calabria (Sila). Of the *Lampetia* species we only found *L. constans* Rossi, rather frequent on flowers of *Mentha aquatica*. *Eumerus* was represented by *E. pulchellus* Lw. (1♂) and *E. sulcitibius* Rond. (2♂). The latter species flew on stony dry fields among the sparse low vegetation and could not easily be obtained because of its small stature and its agility (this applies to most *Eumerus* species). Moreover, it was often mistaken for small Hymenoptera, who behaved likewise. In the region we saw a third *Eumerus* species, possibly *E. nudus* Lw. or *E. olivaceus* Lw., both present in Calabria (Sila). It was impossible to bag.

Concluding, our second locality had several characteristic Central and Northern European species in the heart of the Mediterranean. The same applied to the vegetation in this region.

(3) Short visits were paid to a dry sandy biotope near the coast, 5 km south of Catania, and to Fonte Ciane, a source near Syracuse, giving rise to a small river, bordered by *Papyrus*. Syrphid flies were scarce. The locality near Catania was situated on the border of the Piana di Catania, a region where several African plants occur. This African influence was also found in the Syrphid fauna. Near Catania, *Syrpitta pipiens* L., the everywhere very common European species, was still the most frequent *Syrpitta*, but *S. flaviventris* Macq., a common African species, was easily obtained. Loew described the latter species as *S. spinigera* from Sicily (Syracusa), the Greek Isles

and Asia Minor. In Europe it was furthermore recorded from Spain, from the Mediterranean corridor between Spain and France (Banyuls) and from Corsica and Sardinia.

An interesting find is *Eumerus obliquus* F., originally described from Angola and until now only known from Africa. Our specimens are exactly identical with specimens from Belgian Congo. Only one, from Syracuse, is different in several aspects; it is described below as a new species (*E. sicilianus* nov. spec.). Loew (1848) described *Eumerus cilitarsis* (= *E. obliquus* F.) from presumably Austria ("angeblich Oestreich") but actually his specimen should be labelled "patria ignota". It was labelled Austria but in the same box were Brazilian insects with the same Austria label. Loew wrote that, judging by the appearance of the pin, his specimen was of European origin, but this is no reliable method to establish a locality. Bezzi & Stein (1907) mentioned *E. obliquus* F. from Southern Europe, but according to the literature available in the *Catalogus Dipterozum* it had never been found there. As far as I know our specimens of *E. obliquus* are the first ever recorded from Europe. The other records in the literature (Sack, 1932; Stackelberg, 1961; Séguy, 1961) come evidently from Bezzi & Stein.

SYSTEMATIC PART

***Eumerus etnensis* nov. spec.**

A species possibly most related to *E. jacobsoni* Beck.: abdomen with tergites 2 and 3 mainly reddish, eyes bare, length of eye suture half the length of the frontal triangle, antennae with third joint mainly reddish, femora III considerably thickened, tibiae III club shaped, thoracic disc extensively dusted, with four shining olive green longitudinal bands.

Male. Head. Frons and face with white cloth of very small depressed microtrichae. There are white hairs of moderate length, implanted obliquely among the microtrichae. White cloth on frons sometimes thin and then the olive greenish ground colour may be clearly seen. Vertex inconspicuously and little clothed in the front corner, and with a thin line of thin cloth along the eye margins, but not further than on level with the front ocellus. Vertex on the remaining part shining blackish, with moderate, scattered punctures. Postocular region with the same glittering white cloth as on face and frons and connected with the cloth on the latter along the equally white clothed mouth edge, along both sides of the oral pit (in most *Eumerus* species the surface between oral pit and mouth margin bears no cloth). Thin postocular cloth present behind the vertex, this region therefore dullish grey in contrast with the shining vertex, connecting the more thickly clothed

postocular edges. On the latter white hairs below, yellowish hairs above the level of the humeral calli (head in normal position); yellowish hairs also on the region behind the vertex. Hairs on vertex black, mixed with a few yellowish ones; white hairs on the small clothed patch in the front corner. The hairs halfway between front ocellus and hind ocelli about four times as long as the diameter of the front ocellus, measured horizontally. Eyes completely bare. Eye suture about half as long as the frontal triangle. Ocelli in a clearly isosceles triangle: distance between hind ocelli one third of the distance between front ocellus and hind ocelli. Distance from the line connecting the eye hind corners to the hind ocelli equal to the distance of the mentioned line to the posterior margin of the head, and equal to two-thirds of the distance between the front ocellus and the hind ocelli. Antennae mainly reddish on first and third joints. Third joint sometimes slightly darkened on the top half. Second joint often darkened in the middle, with reddish base and top. Sometimes all three joints more or less uniformly reddish brown. Arista dark brown. Shape of third joint, fig. 2.

Thorax with extensive greyish cloth of very small microtrichae. Dull, except on four shining olive green longitudinal bands: two more narrow bands have between them a still narrower median clothed band, and, more sideways, broader shining bands begin just inside of the humeral calli and end on level with the front margin of the alar calli, interrupted by a clothed cross band along the transverse suture. The median clothed band ends on level with the wing roots and beyond, therefore, the median shining bands form a shining patch, separated from the lateral shining bands by a narrow clothed line. Scutellum with clothed edge along its whole margin and with clothed patch in the middle of the disc, on the front half. Thoracic disc with a clothed part just in front of scutellum, connected with the clothed bands along the side margins of the thoracic disc and with the narrow clothed lines mentioned above. Humeral callus dull, clothed; alar callus shining, without cloth. The described clothed areas can be clearly seen when viewed obliquely from behind. In some specimens the distal half of the thoracic disc has extended shining parts: a reduced clothed patch in front of the scutellum. Punctures of moderate size, scattered. Hairs on mesonotum brownish yellow, intermingled with a few black hairs, sometimes quite a few. Scutellum with brownish yellow hairs, on the outer downwards sloping edge with whitish hairs. Pleurae with whitish cloth and rather long white hairs. The hairs on the middle of the thoracic disc more than three times as long as the diameter of the front ocellus, some whitish hairs of about half this length among the longer ones.

Abdomen. Tergite 1 dark olive green; tergite 2 mainly reddish, darkened

on a narrow edge along the front margin, sometimes the edge no more than a line with a little black spot on each side thrusting out into the reddish coloured main part. Tergite 3 reddish, rarely mainly darkened behind the V-shaped figure of white hairs and white cloth. In most specimens small black spots are found in front of the V or in the angle of the V. Tergite 4 shining blackish, in some specimens with reddish patches in the front and hind marginal corners. All tergites with numerous and rather coarse punctures. Hypopygium shining blackish. Sternites brownish yellow, sternite 4 with dark edge along the hind margin and sometimes also with dark side margins. Tergites 2-4 with narrow oblique bands formed by white cloth of microtrichae covered by white hairs (sometimes also a few black ones), thus each tergite with a V-shaped figure when seen from thorax. This V is clear on tergites 3 and 4, less so on tergite 2. Short semidepressed hairs on tergites 2 and 3, behind the V, longer yellowish hairs in front of the V's. Just in front of the angle of the V, where most specimens have a pair of small black spots, there are a few (sometimes more) black hairs, which may be also discovered along the front margin of the tergite. The hairs are more depressed on the upper part of the tergite, more upright and longer on the sides. Here the white hairs of the V spread along the whole side margin on tergite 4, where the darker hairs only occur on the top middle: black hairs are found behind the V, and yellowish brown hairs in the front of the V. Hind margin of tergite 4 with narrow edge, clothed whitish. Hypopygium with brownish hairs, about $3-3\frac{1}{2}$ times as long as the diameter of the front ocellus. Sternites with scattered whitish hairs, on sternite 2 about three times as long as the diameter of the front ocellus. Sternite 4 with bristly black hairs, intermingled along the front margin with a few whitish ones, along the hind margin with small triangular indenture in the middle, at both sides of the obtuse top angle of the indenture a tuft of black hairs, only a little shorter than the hairs on the hypopygium. A comb-like row of very small stout bristles occurs along the whole hind margin of sternite 4.

Wings clear, stigma yellowish brown, r_{4+5} a little sinuous.

Legs bronzy black. Basal fourth or third and narrowly the top of tibiae II, even more narrowly knee I, and the first (narrowed) part of tibiae III, reddish. Tarsi II, and rarely also tarsi I, reddish below. Hairs on the legs white, but on tarsi III with black hairs above, especially on the last joints, all tarsi with dense reddish hairs below, on the outer distal margin of tibiae III a brush of dense reddish hairs of the same appearance as the reddish hairs on the tarsi below. This brush is very conspicuous between the white hairs of tibiae III and the black hairs on tarsi III. Shape of the

hind leg, fig. 1. Trochanter III without projection. Longest hairs in the posterior fringe of femora II about two times as long as the diameter of the front ocellus. Hairs on the outside of the tibiae sub-erect. Maximum diameter of femur III $2^{1/2}$ - $2^{3/4}$ \times the maximum diameter of femur II. The same ratio for tibia III: tibia II is $2^{1/4}$. The ratio for the lengths of the first joints of respectively tarsi III and tarsi II (seen from above, measured over the median line) is $1^{3/4}$.

Female. Head about $4^{1/2}$ times as wide as the frons, measured at the level of the hind ocelli. Frons with whitish cloth from front ocellus downwards. The unclothed part (until the line connecting the eye hind corners) with black hairs, other characters of the head and thorax as in the male. Abdomen as in the male, but hind margin of tergite 4 almost without cloth, but broadly clothed in hind corners, reddish in front corners. Sternite 4 simple, with whitish hairs. Hind femora less thickened, hind tibiae without the characteristic brush of reddish hairs, hind tarsi with white hairs above, hind tibiae narrowly reddish at the top.

Length 6-8 mm.

Material. ♂ holotype, ♀ allotype, 8 ♂ paratypes, labelled: Italia, Sicilia, Etna, Rifugio Filicium, 1400-1500 m, 22-28.VII.1961, leg. V. S. v. d. Goot; in the collection of the Leiden Museum.

12 ♂♂ with same label but leg. J. A. W. Lucas in private collection Lucas, 1 ♂ with same label (Lucas) in private collection H. J. Lambeck.

The specimens were found on tree leaves in *Castanea* forest, rather high above ground level. The ♂ have a characteristic triple coloured (white-reddish-black) hair flag on the hind legs.

Eumerus obliquus F.

The characteristic hind legs of this species have been adequately described by Loew (1848): the tarsal joints are widened and along the outer edges of the first four joints there is a brush of long bristly black hairs (Sack, 1932, pl. 17 fig. 136). In the net the species will be recognized immediately because the only clear markings on the thoracic disc, visible with the naked eye, are a pair of white cross bands along the transverse suture. By this feature, *E. obliquus* is quite characteristic among the European species in the ♂ and ♀ sex, with the exception of *E. silicianus* nov. spec., a near relative of *E. obliquus*, described below. The above mentioned cross bands are not mentioned in the descriptions. They were present in all specimens from Europe and Africa inspected by me (Loew wrote: ".....bei meinem Exem-

plare ohne deutliche weisse Striemen"). In order to enable a clear distinction between *E. obliquus* F. and *E. sicilianus* nov. spec., I shall give a short description of the most apparent characters of *E. obliquus* F.

Head. Vertex with black hairs, but with white hairs on the small white clothed spot in the front corner; halfway the ocellar triangle a butterfly-like whitish clothed patch and an inconspicuously clothed cross band between the eye hind corners; the other parts black, with coarse punctures. Post-ocular edge, seen from above, mainly dark behind vertex and downwards until the level of the humeral calli (head in normal position), with an isolated white clothed spot along the eye hind margin, the median boundary of the spot separated from the eye hind corner over a distance about equal to the distance from the eye hind corner to a hind ocellus. Eye with rather numerous hairs, their length equal to the diameter of the front ocellus. Antennae greyish black. Frons and face with white cloth and white hairs. Eye suture a little more than half the length of frontal triangle.

Thoracic disc with vestigial clothed median band on the front margin. Under 100 × enlargement it is possible to trace out this band until the transverse suture; along the inner ends of this suture there are clear white clothed cross bands, clothed patches left and right of the median band going backwards not further than halfway to the transverse suture. Coarse and numerous punctures (also on scutellum), colour dullish black, hairs black and light brown, length of the hairs on the middle of the thoracic disc about 1½ times as long as the diameter of the front ocellus: shorter and less numerous in comparison with *E. sicilianus* nov. spec. Other parts of scutellum and thoracic disc as in *E. sicilianus*.

Abdomen. Tergites 2-4 each with a pair of straight bands of white cloth and white hairs, forming on each tergite a V-shaped figure, viewed from thorax; the pairs on tergites 3 and 4 united in the middle, the outer ends of the bands on tergite 3 directed towards the hind margin and reaching it inside of the hind corner, on tergite 4 the outer ends of the bands reach the hind margin well beyond the obtuse hind corner of the tergite. White hairs on the middle of the hind margin of tergite 4 four times as long as the diameter of the front ocellus. Other hairs on abdomen also longer in comparison with *E. sicilianus*. Sternite 4 arched, hind margin with a pair of dent-like elongations, between these middle of hind margin arched from below the median bases of the dents upwards towards a median longitudinal low keel, the latter going backwards until just before the front margin of the sternite, gradually becoming lower. On the points of the dents and backwards until at level with the front end of the above mentioned keel a pair of dense longitudinal yellowish brown hair brushes, curved

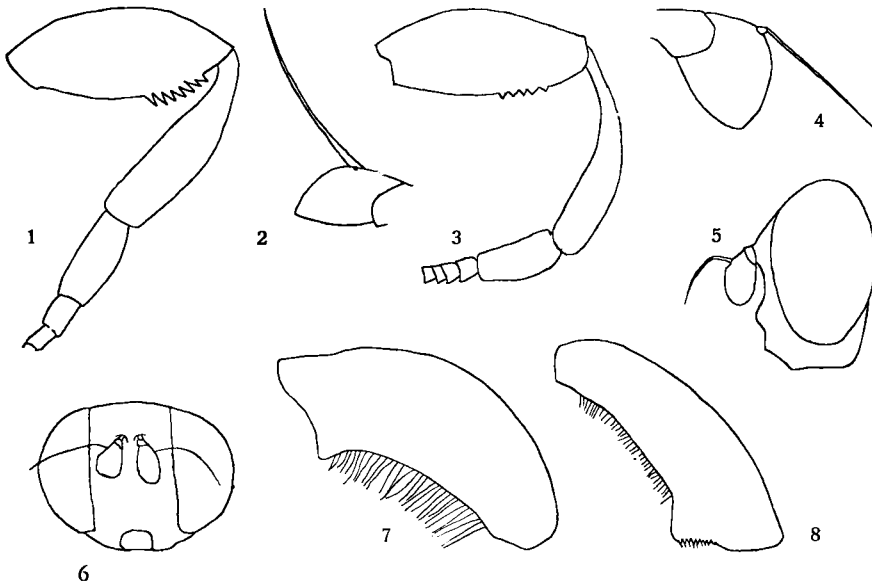
inwards and concealing the structure: the ends of the hairs of the opposite brushes entangled above the keel but towards hypopygium, above the open space between the dents, well separated. The hairs of the brushes on punctures of moderate size. Other parts of the sternite without punctures. Dents dullish, with greyish bloom.

Eumerus sicilianus nov. spec.

A near relative of *E. obliquus* F., but different as to cloth and colour of the hairs on vertex, cloth on upper part of postocular edge, numerousness and length of eye hairs, clothed parts on anterior half of thoracic disc, shape of the bands and length of the hairs on abdomen, and, last not least, sternite 4 a little different and brush of bristly black hairs along the outer edges of the first four joints of hind tarsi absent and hind leg less thickened.

Male. Head. Frons, face and postocular edge with greyish white cloth of very small depressed microtrichae. In the passage between face and postocular edge the cloth is also present between the oral pit and mouth margin, but appears as a thin cover. Vertex covered by a little more greyish cloth, with the exception of a small spot surrounding the front ocellus and an oval spot narrowly surrounding the hind ocelli. Postocular edge above the level of the humeral calli and behind the vertex with white cloth, with the exception of a narrow shining band on each side behind the eye hind corners. Punctures on vertex coarse, appearing as small dark spots, clothed interspaces generally not exceeding the diameter of a puncture. Eyes with few and short hairs, their length nearly half the diameter of the front ocellus. Frons with white hairs, implanted among the microtrichae, along the eye margins and laterally from the implantation of the antennae, few white hairs on the middle of the face, more along the eye margins. Short white hairs on the postocular edge below the level of the humeral calli, becoming longer downwards towards the mouth edge, above the mentioned level light brown hairs, also on vertex. On the latter moreover some black hairs on the unclothed oval spot and white hairs on the clothed part below the front ocellus. The hairs in the middle of the ocellar triangle about three times as long as the diameter of the front ocellus. Ocelli in a clearly isosceles triangle: distance between front ocellus and hind ocelli about $2\frac{3}{4}$ times as long as the distance between the hind ocelli, and the first mentioned distance about equal to the distance from the hind ocelli to the line connecting the eye hind corners. The distance between the hind ocelli a little shorter than the distance from the posterior margin of the head to the above mentioned line. Length of eye suture only $\frac{3}{5}$ of the length of the frontal triangle. Antennae (fig. 4) dark brown, third joint with greyish bloom.

Thorax. From the anterior margin of the disc a median clothed band as far as the level of the wing roots. On both sides of it a longitudinal shining band of about the same width, between the latter and the humeral calli a clothed rectangular triangle with its hypotenuse from the inner margin of the humeral callus to the inner end of the transverse suture and united



Figs. 1-2. *Eumerus etnensis* nov. spec. 1, hind leg; 2, antenna.
 Figs. 3-4. *Eumerus sicilianus* nov. spec. 3, hind leg; 4, antenna.
 Figs. 5-6. *Cheilosia amicora* nov. spec. 5, head, lateral view; 6, head, front view.
 Figs. 7-8. *Lampetia avida* Rossi. 7, form A, hind femur; 8, form B, hind femur.

here with a small cross band along the transverse suture. Humeral callus evenly covered by white cloth, cloth of the same texture present behind the humeral callus until the transverse suture; behind the latter, along the side margin of the thoracic disc, a triangular patch of thin cloth until the wing root. On the thoracic disc, next to the alar callus, a clothed patch, its surface about equal to the surface of the alar callus, the latter without cloth. Other parts of thoracic disc moderately shining, cupreous; with coarse punctures, very numerous on scutellum and on the surface in front of it: interspaces here much smaller than the diameter of a puncture. On the latter part of thoracic disc the hairs are sub-erect, curved in anterior direction; on the other parts of thoracic disc the hairs are also sub-erect, but curved in posterior direction: along the boundary between the two parts a

“reversed parting” is seen as in *E. obliquus* F. All hairs on scutellum and thoracic disc brown, lighter hairs on the white clothed horizontal ridge along the hind margin of scutellum. Hairs on the middle of thoracic disc about twice as long as the diameter of the front ocellus. Pleurae with rather thin greyish cloth and brown hairs.

Abdomen shining bluish black, with extremely numerous coarse punctures: interspaces smaller than the diameter of a puncture in all directions, especially on tergite 2. Tergites 2-4 each with a pair of lunules: curved oblique bands, median part directed obliquely outwards, lateral end about perpendicular to the side margin. Lunules of each pair on tergites 3 and 4 separated in the middle over a distance about equal to the diameter of the front ocellus, on tergite 2 over twice that distance. Outer end of the lunule on tergite 2 narrowly united with a clothed patch in the hind corner of the tergite, just behind the outer end of the lunule. The mentioned clothed patch united with a small clothed patch in the front corner of tergite 3. Outer end of the lunule on tergite 3 on the same level as the lunule on tergite 2, separated from hind and side margins over a distance of more than its own width; behind the end of the lunule the hind margin of tergite 3 has a narrow greyish clothed edge. Outer end of the lunule on tergite 4 directed towards the obtuse hind corner, but the lunule fades away and the hind corner is shining, with very thin cloth. Even more so on a narrow edge along the middle of the hind margin and along the front part of the side margin. Other parts of abdomen without cloth, shining. Hypopygium and sternites 3 and 4 shining black, sternites 1 and 2 dullish grey. General structure of sternite 4 as described for *E. obliquus* F., but dent-like elongations much broader, lobe-like, shining blackish brown, other parts of the sternite with very short black hairs (absent in *E. obliquus*), no keel present, hair brushes shorter. Other sternites with short white scattered hairs. Hairs on hypopygium black, half-erect, on the middle about twice as long as the diameter of the front ocellus. Hairs on tergites 2 and 3 light brown, short on upper part, a little longer on the sides, half-erect; white hairs are found on the lunules and along the side margins. On tergite 4 black hairs with sometimes a brownish shade in front of the lunules; behind the latter some black hairs on the sides, mainly light brown hairs and white hairs on the white clothed parts along the hind margin; the white hairs in the middle of the hind margin not longer than three times the diameter of the front ocellus.

Wings clear, r_{4+5} a little sinuous, stigma greyish brown, translucent.

Legs blackish brown, with greyish bloom, all tibiae narrowly reddish at the base (quite black in *E. obliquus* F.). Ratio's for the maximum width

of femur III in proportion to that of femur II, and likewise for the tibiae, both about 2 (in *E. obliquus* F. the femur ratio $2^{2/3}$, and the tibia ratio $2^{1/2}$). Ratio for the length of the first joint of tarsi III, seen from above, measured along the median line, in proportion to its maximum width about $2^{1/4}$. Black hairs present on the first four joints of tarsi III, but more or less evenly distributed and short: longest hairs on the outer edge of second joint not longer than about one third of the width of the joint (in *E. obliquus* F. $3/4$). Shape of hind leg, fig. 3. Hairs on the legs long, mainly half-erect, white; moreover numerous short black semidepressed hairs are present on femora I and II, between the long white ones. Legs generally blackish brown, but narrowly reddish on the bases of femora I and II, on whole tibiae I and II, on tarsi I and II below, narrowly on the base of tibia III.

Length 6.5 mm.

Material. ♂ holotype with label: Italia, Sicilia, Syracusa, Fonte Ciane, 9.VIII.1961, leg. J. A. W. Lucas; in the private collection Lucas.

***Cheilosia amicorum* nov. spec.**

A near relative of *Cheilosia pagana* Mg., but recognized on account of the more widened frons, the smaller third joint of the antennae, the colour of the legs, etc.

Female. Head. Face, frons and vertex widened (fig. 6). Width of frons, at the front ocellus, twice the length of third antennal joint, measured on median surface from the tip of the second joint. Face extensively covered by microtrichae, the only unclothed parts are a small spot around the tip of the facial knob and a spot just below it, at the mouth margin. Facial knob clearly limited above (fig. 5). Third antennal joint large, reddish, with black edge along the upper margin on lateral surface: third antennal joint (measured as mentioned above) about one third the length of the arista. First antennal joints black. On the frons, along the eye margins, from the level of the implantation of the antennae upwards, a pair of clothed strips not surpassing the lateral longitudinal grooves. The latter reach the eye hind corners. Median groove present, from a diamond-shaped small impression above the antennae upwards, gradually fading away until halfway to the front ocellus. A cross groove, curved upwards, connects the clothed strips, starts just below the upper limit of the strips, intersects the median groove. Other parts of the frons smooth, shining black, with fine punctures, with short light brown hairs below, and upwards from halfway the implantation of the antennae to front ocellus, with short black

hairs; length of the light hairs not fully twice the diameter of the front ocellus. Postocular edge with conspicuous cloth, not reaching the eye hind corners, connected below, along the passage between eye margin and mouth margin with the cloth on the face. Eyes bare.

Thorax. On the disc with fine punctures and semi-depressed light brown hairs and a few black ones. Humeral callus clothed, thin cloth behind it until the transverse suture. Other parts black, strongly shining. Pleurae extensively covered by thin cloth: anterior swollen part of mesopleura with thin greyish cloth, not strongly shining black as on thoracic disc. Scutellum shining black, with light brown hairs, along the hind margin with ten black bristles, the longest median ones about as long as two thirds of the length of scutellum. The paratype has four bristles, but the median bristles are of the same relative length as in the type.

Abdomen. Tergites black, shining, with dark brown short depressed hairs; these hairs, on the middle of the hind margin of tergite 5, about $1\frac{1}{2}$ times as long as the diameter of the front ocellus. Along the sides of tergites 1 and 2, and in the front corners of tergites 3-5 longer white erect hairs. Sternite 1 grey, sternites 2-5, towards the top of abdomen, gradually less grey and more shining blackish brown. All sternites with sparse short white hairs.

Halteres greyish yellow. Squama white. Wings clear, stigma very light grey, translucent; veins in anterior half without reddish parts, black.

Legs black, but basal fourths of tibia I and III and basal third and extreme tip of tibia II and more or less the two basal joints of tarsi I below yellowish. Hairs on femora and tibiae short, yellow. Tarsi II below with numerous black bristles. Longest hairs in the posterior fringe on femur II about two times the diameter of the front ocellus. Femur III with short black bristles on the top half below and with black hairs around the top, with white cloth above. Structure of the hind legs as in *C. pagana*. Coxae I and III with greyish bloom, coxae II shining.

Length 6 mm.

Material. ♀ holotype, ♀ paratype, labelled: Italia, Sicilia, Monti Nebrodi, Biviere di Cesaró, 1250-1350 m, 30.VII-7.VIII.1961, leg. V. S. v. d. Goot; in collection Museum Leiden. From beech forest.

This species is dedicated to Virginio Diblatto, Nic Fragapane, Nic Parrino and Amleto Lanza, who kindly accompanied us during our camp in the Monti Nebrodi.

Remark. In *C. amicorum* nov. spec. there are some short hairs on the upper part of the sides of the facial knob. With some determination one

could incorporate this species in the species group with the face (excluding eye margins) with outstanding hairs, apart from any cloth or microscopic pile. This reminds us of the fact that an eventual classification of the genus *Cheilosia* in groups with hairy face, hairy eyes etc. is highly artificial; these divisions should be used for identification only. In the paratype specimen the lateral bristles along the hind margin of scutellum were not broken off; the number of bristles in *Cheilosia* specimens of one species appears to vary considerably.

***Cheilosia pagana* Mg.**

Some characters in comparison with the above mentioned ones of *C. amicorum* nov. spec.:

Face, frons and vertex much narrower: width of frons at front ocellus only $1\frac{1}{2}$ times as long as the length of third antennal joint. Face with extensive parts black, shining, without cloth. Facial knob and implantation of antennae with bridge-like connection. Third antennal joint larger: only half as long as the arista. Arista of the same length as in *C. amicorum* nov. spec. and with pubescence of the same texture. Frons without median groove, clothed strips smaller, colour of the hairs varying. On the pleurae the swollen anterior part of mesopleura without any cloth, shining black and of the same appearance as the whole thoracic disc. Colour of the hairs on the tergites varying, but the hairs on the middle of the hind margin of tergite 5 not exceeding in length the diameter of the front ocellus. Sternites 2-5 shining black, sternite 1 a little greyish. Legs with extended yellow parts: tarsi always partly yellow above; hairs as in *C. amicorum*. Wings with reddish veins.

In the key in Sack (1932, p. 44) the above mentioned species may be separated as follows.

38. Third antennal joint elongate oval, large. Arista long, not thickened, inserted on the basal part of the dorsal margin of third antennal joint. Thoracic disc with short semi-depressed hairs 38A
 — Third antennal joint nearly circular. Arista short, a little thickened, inserted half-way the dorsal margin of third antennal joint. Thoracic disc with longer, sub-erect hairs *C. hercyniae* Loew
 38A. Width of frons at front ocellus twice the length of third antennal joint. Anterior swollen part of mesopleura greyish. All tarsi black above *C. amicorum* nov. spec.
 — Width of frons at front ocellus at most four-thirds the length of third antennal joint. Anterior swollen part of mesopleura shining black, of the same appearance as thoracic disc. Tarsi I and II extensively yellow above *C. pagana* Mg.

Lampetia avida Rossi (= *L. spinipes* F.)

On Mount Etna we found two forms of *L. avida*, without intermediates, clearly separable, as well in the ♂ as in ♀ sex. Intermediate forms occur on the Italian continent, however, and it is difficult to decide on specific validity. Paramonow encountered the same difficulties in Southern European Russia and described some varieties (*crassifemoris* Param. and *femoratoides* Param.). The species *L. femorata* Sack belongs to this group. I will summarize the Sicilian forms in the following key.

- a. In both sexes length of the longer fine white hairs on femur III below about as long as five times the diameter of the front ocellus. On sternites 2 and 3 several hairs very long: 8 (♂) or 6 (♀) times the diameter of the front ocellus. In the ♂ femora III much thickened (fig. 7): maximum width, seen from above, equal to half the length of tergite 4. Abdomen, hypopygium, legs, coxae and trochanters with longer hairs. Specimens of darker colour: abdomen in the ♂ brown-metallic; in the ♀ tergite 2 reddish, tergite 3 with reddish edge along the front margin, other parts of the tergites black with clear white oblique bands on tergites 3 and 4. Length, 13-15 mm form A.
- b. In both sexes the longer fine white hairs on femur III below short; never longer than twice the diameter of the front ocellus. On sternites 2 and 3 the hairs rather short: not longer than 4 (♂) or 3 (♀) times the diameter of the front ocellus. In the ♂ femur III slender (fig. 8): maximum width, seen from above, only one third of the length of tergite 4. Abdomen, hypopygium, legs, coxae and trochanters with shorter hairs. Reddish coloured form: abdomen in the ♂ wholly reddish, except tergite 1; in the ♀ tergite 2 reddish, tergite 3 reddish in front of the oblique bands, the latter not so clear, yellowish white. Length, 11-15 mm form B.

Material. All specimens of both forms were caught on Mount Etna (Rifugio Filiciusa, 1400-1500 m, 22-28.VII.1961, leg. V. S. v. d. Goot & J. A. W. Lucas), and they are preserved in the Leiden Museum (6 ♂, 9 ♀ of form A, and 8 ♂, 4 ♀ of form B) and in the private collection of J. A. W. Lucas (10 ♂, 11 ♀, and 19 ♂, 6 ♀ of forms A and B, respectively).

Syrphus etnensis nov. spec.

Female. Head. Eyes hairy, but the hairs short: their length $\frac{1}{2}$ - $\frac{3}{4}$ of the diameter of the front ocellus. Frons and vertex with blackish brown hairs, length of the hairs halfway implanation of antennae and front ocellus about $1\frac{1}{2}$ the diameter of the latter. Width of head nearly 4.7 times the width of vertex on the level of the hind ocelli, and the latter width equal to the length of the arista. Vertex shining black, front boundary of the black part formed by two horizontal low symmetric curves: the two inner halves of the curves reach each other under an extremely obtuse angle. Distance from the top of the angle to the front ocellus about $1\frac{1}{2}$ times as long as

the distance between front ocellus and hind ocelli. Behind the ocellar triangle the black part nearly reaches the posterior margin of the head, but here mixed with the greyish colour of the postocular edge. The latter becomes white on the downwards curved part of the head, there with white hairs, on the upper part with greyish yellow hairs with the tops kinked in front direction. Postocular edge widened on the sides: eye hind margin curved in front direction. Frons yellow, face greyish yellow, with numerous rather long hairs nearly twice the diameter of the front ocellus. Facial knob darkened, narrowly connected with the darkened front corner of the mouth margin. Inside the lower eye hind corner a shining black patch, nearly reaching the mouth margin with its rectangular top angle, and with the ends along the eye margin towards the face and towards the postocular edge. Antennae with the first two joints dark brown, third joint brown; below, especially at the base, reddish. Arista rather short: as long as second and third joints of antennae combined, brown, at cross-section quadrate. Black bristles at the top of the second joint above about as long as the eye hairs.

Thoracic disc shining like in *S. nitidicollis* Mg., but notopleural depression and the region behind it as far the wing base with cloth of microtrichae (some microtrichae also present on thoracic disc) and dullish grey. Pleurae clothed by microtrichae, whitish grey and dull, but metapleura shining black. Thoracic disc with long greyish white hairs, pleurae with long white hairs. Hairs on the middle of thoracic disc about three times as long as the diameter of the front ocellus. Alar callus a little reddish. Scutellum translucent yellow, with black hairs; on the front corners, along the side margin, a tuft of white hairs and some white hairs below, along the hind margin.

Abdomen with three pairs of yellow spots on tergites 2-4, on tergites 3 and 4 lunule-like: inner and outer end reach the front margin; all spots reach the side margin with their upper corners. Tergite 5 with small yellow spots in the front corners, and with yellow hind margin, united along a narrow yellow edge along the side margin with the front corner spots. Venter yellow; with a circular black spot on sternite 2, and with triangular black spots (with the top angle in front direction) on sternites 3 and 4; sternite 5 wholly darkened. Sternites with white hairs, black parts of the tergites with short semi-depressed black hairs and the yellow parts with finer and longer, sub-erect yellow hairs. A tuft of long white hairs in the front corners of the second tergite and on the sides of the first tergite. Haltere yellowish white, squama white with yellowish fringe.

Wings clear, stigma yellowish brown, r_{4+5} distinctly curved, only a little less than in ♀ *S. lapponicus* Zett. (compare with Lundbeck, 1916, p. 310,

fig. 124). Veins behind subcosta reddish brown, on basal part reddish, subcosta and costa black, also reddish on basal part.

Legs yellow, but femur III black, except narrowly at the top; femur I and II black on basal third; tibia III with black ring in the middle, tibia III three times as long as the ring is wide; all tarsi darkened above on joints 2-4. Legs I and II with short, yellowish semidepressed hairs and moreover on femora I and II long erect hairs on the postero-ventral sides. Hairs on femur III like on femora I and II, but predominantly short black hairs on the yellow top: likewise tibia III with predominantly short Semi-depressed black hairs and tarsi III with mainly these black hairs above. Metatarsus III $2\frac{1}{2}$ times as long as metatarsus I, and half as long as tibia III.

Length 10 mm.

Material. ♀ holotype labelled: Italia, Sicilia, Etna, Rifugio Filicusa, 1400-1500 m, 22-28.VII.1961, leg. V. S. van der Goot; in the collection of the Leiden Museum.

Remark. The species is most related to *Syrphus corsicanus* Becker: short eye hairs, r_{4+5} curved, abdomen with lunules on tergites 3 and 4. There are, nevertheless, several distinctive characters: the black parts on the legs (in *S. corsicanus* legs wholly reddish); the black spots near the lower eye hind corners (in *S. corsicanus* this part wholly yellow); the black hairs on the disc of scutellum (in *S. corsicanus* greyish yellow); the darkened front corner of the mouth (in *S. corsicanus* yellow); sternites with black spots (yellow in *S. corsicanus*); lunules not as in *S. lunulatus* Mg. ♀.

LIST OF THE SYRPHID SPECIMENS FROM THE 1961 EXCURSION
IN THE COLLECTION OF THE LEIDEN MUSEUM.

1. <i>Cnemodon vitripennis</i> Mg.	Soro: ♀.
2. <i>Orhoneura nobilis</i> Fall.	Biviere: 4 ♂.
3. <i>Liogaster splendida</i> Mg.	Biviere: 4 ♂, 4 ♀.
4. <i>Chrysogaster solstitialis</i> Fall.	Biviere: 2 ♂.
5. <i>Cheilisia amicorum</i> nov. spec.	Biviere: 2 ♀.
6. <i>C. conops</i> Beck.	Biviere: ♂.
7. <i>C. soror</i> Zett.	Biviere: ♂.
8. <i>Neoascia podagrica</i> F.	Biviere: 2 ♂, 2 ♀.
9. <i>Paragus bicolor</i> F.	Biviere: 13 ♂, 4 ♀; Etna: ♂, 2 ♀; Syracusa: ♂, ♀; Catania: ♂. Frequent.
10. <i>P. cinctus</i> Schin. & Egg.	Biviere: ♂.
11. <i>P. quadrifasciatus</i> Mg.	Biviere: copula ♂, ♀; Etna: ♀; Syra- cusa: ♀.
12. <i>P. tibialis</i> Fall.	Biviere: 5 ♂, 2 ♀; Soro: ♀; Syracusa: ♀; Catania: ♀; Etna: 3 ♂, 7 ♀. Common.

13. *Platycheirus albimanus* F. Etna: ♀.
 14. *P. fulviventris* Macq. Biviere: ♂.
 15. *Melanostoma mellinum* L. Biviere: ♂, 7 ♀. Frequent.
 16. *M. scalare* F. Biviere: ♀.
 17. *Syrphus albostrigatus* Fall. Biviere: ♀; Etna: ♂.
 18. *S. auricollis* Mg. Biviere: ♂.
 + var. *maculicornis* Zett. Biviere: 2 ♂, ♀.
 19. *S. balteatus* Deg. Biviere: 2 ♀; Etna: ♀. Frequent.
 20. *S. corollae* F. Biviere: ♂, ♀; Etna: 2 ♂, 2 ♀, and on 2050 m ♀; Soro: ♀. Frequent.
 21. *S. etnensis* nov. spec. Etna: ♀.
 22. *S. latifasciatus* Macq. Biviere: ♀.
 23. *S. luniger* Mg. Biviere: ♀; Soro: 4 ♂, 2 ♀; Etna: 6 ♂, 6 ♀. Frequent.
 24. *S. ribesii* L. Soro: ♂, ♀; Etna: ♂, ♀. Frequent.
 25. *S. vitripennis* Mg. Soro: ♀; Etna: ♂, 2 ♀. Frequent.
 26. *Didea fasciata* Macq. Etna: 2 ♂, ♀.
 27. *Scaeva albomaculata* Macq. Etna: 9 ♂, 5 ♀, and on 2950 m 70 ♀, 4 ♂. Note the different sex ratio's. Common.
 28. *S. pyrastris* L. Etna: ♂, ♀, and on 2050 m ♀. Frequent.
 29. *S. selenitica* Mg. Etna: ♂, ♀.
 30. *Xanthogramma pedissequum* Harr. Biviere: 23 ♂, 4 ♀. Common.
 31. *Sphaerophoria rueppellii* Wied. Biviere: ♂, ♀; Catania: ♀.
 32. *S. scripta* L. Biviere: ♂, 3 ♀; Etna: ♂, ♀; Syracuse: ♀. Common.
 33. *Chrysotoxum bicinctum* L. Biviere: ♀; Etna: ♂, 3 ♀.
 34. *C. cisalpinum* Rond. Biviere: ♀.
 35. *C. intermedium* Mg. Biviere: 5 ♀; Soro: 2 ♂, ♀; Etna: 11 ♂, 5 ♀. Frequent.
 36. *Volucella zonaria* Poda Soro: ♀; Etna: 2 ♂, ♀.
 37. *Eristalodes taeniops* Wied. Biviere: ♀; Etna: 10 ♂, 9 ♀, and on 1300 m 2 ♂, and on 2050 m ♀. Common.
 38. *Eristalinus sepulchralis* L. Biviere: 3 ♂, ♀; Syracuse: ♀. Frequent around Lago Biviere.
 39. *Lathrophthalmus aeneus* Scop. Etna: 2 ♂; Catania: ♀. Frequent.
 40. *Eristalis arbustorum* L. Biviere: 2 ♂; Etna: 5 ♂. Common.
 41. *E. pratorum* Mg. Etna: ♂.
 42. *E. tenax* L. Biviere: ♂, ♀; Soro: ♂; Etna: 2 ♂, and on 2950 m 2 ♀; Catania: ♂, 3 ♀. Common.
 43. *Myiatropa florea* L. Biviere: 2 ♀; Etna: 3 ♂, ♀. Common.
 44. *Lampetia avida* Rossi, form A. Etna: 6 ♂, 9 ♀. Frequent.
 do., form B. Etna: 8 ♂, 4 ♀. Frequent.
 45. *L. constans* Rossi Biviere: 14 ♂, 3 ♀. Frequent.
 46. *L. pruni* Rossi Etna: 4 ♂, and on 2050 m ♂.
 47. *Eumerus amoenus* Lw. Etna: 2 ♂, 3 ♀.
 48. *E. etnensis* nov. spec. Etna: 9 ♂, ♀. Frequent.
 49. *E. obliquus* F. Catania: ♂, 2 ♀; Syracuse: ♂.
 50. *E. pulchellus* Lw. Biviere: ♂.
 51. *E. sulcitibius* Rond. Biviere: 2 ♂.
 52. *E. spec.*, near *barbarus* Coq. Etna: ♀.
 53. *Syritta flaviventris* Macq. Catania: 3 ♂; Syracuse: ♂. Frequent.

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| 54. <i>S. pipiens</i> L. | Biviere: 3 ♂; Etna: ♀; Catania: 3 ♂,
♀. Common. |
| 55. <i>Milesia semiluctifera</i> Vill. | Etna: ♂. |
| 56. <i>Myolepta luteola</i> Gmel. | Biviere: ♀. |
| 57. <i>Spilomyia boschmai</i> Lucas | Biviere: ♀. |

Abbreviations:

- Biviere: Monti Nebrodi, Biviere di Cesaró, 1250-1350 m, 30.VII.-7.VIII.1961.
 Soro: Cesaró, Monte Soro, 1750-1850 m, 3.VIII.1961.
 Etna: Etna, Rifugio Filiciusa, 1400-1500 m, 22-28.VII.1961.
 Etna, 1300 m: Etna, along the road to Nicolosi, 1300 m, 21.VII.1961.
 Etna, 2050 m: Etna, lower end of Funicolare Etna, 24.VII.1961.
 Etna, 2950 m: Etna, upper end of Funicolare Etna, 24.VII.1961.
 Catania: Five km South of Catania, 7-11.VIII.1961, sea-level.
 Syracuse: Syracuse, Fonte Ciane, 9.VIII.1961, about sea-level.

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