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Descriptions with key to the third larval stage and puparia of the genus *Epistrophe* s. str. (Diptera: Syrphidae)

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Abstract: The third larval stage and/or puparia of seven Central European species of the genus *Epistrophe* s.str. WALKER, 1852 are described. Descriptions of immature stages of *E.diaphana* (ZETTERSTEDT, 1843), *E.cryptica* DOCZKAL & SCHMID, 1994 and *E.melanostoma* (ZETTERSTEDT, 1843) are given for the first time. Immature stages of *E.eligans* (HARRIS, 1780), *E.flava* DOCZKAL & SCHMID, 1994, *E.nitidicollis* (MEIGEN, 1822) and *E.grossulariae* (MEIGEN, 1822) are redescribed. The posterior respiratory processes of the third larval stage or puparia were photographed. Key to the third larval stage and puparia is given.

INTRODUCTION

The larvae of aphidophagous syrphids (subfamily Syrphinae) are the most important predators of aphids. Determination and description of immature stages have been problematic due to needs of taxonomic revisions of some genera. The central European species of the genus *Epistrophe* WALKER, 1852 were revised by DOCZKAL & SCHMID (1994). Mentioned work enables us to prepare the descriptions and the key to the third larval stage and puparia of species of this genus. The authors prepared the key to the third larval stage and puparia together, because the key characters: morphology of posterior respiratory process and integument (vestiture, segmental spines) remain on puparium almost without changes.

The key for immature stages of Palaearctic Syrphidae was previously published by DIXON (1960), DUŠEK & LÁSKA (1960, 1961, 1967), OKUNO (1967), GOELDLIN (1974), ROTHERAY (1993, 1999) and TORP (1994), but mainly on the generic level. A study shows that the differences in larval morphology among species of some genera are enough for determination to the specific level.

The genus *Epistrophe* WALKER, 1852 was very extensive in SACK's (1932) conception. In the years 1967–1969 it was divided into several genera and the species *E.nitidicollis* MEIGEN, 1822 was replaced from the genus *Syrphus* (DUŠEK & LÁSKA 1967; HIPPA 1968; VOCKEROTH 1969). The authors do not include the taxon *Epistrophella* in the genus *Epistrophe* s.str. DUŠEK & LÁSKA described it as separate genus in 1967. Many authors dealing with evolution of Syrphinae accepted this taxon. However, some authors incorporated the taxon *Epistrophella* in the genus *Epistrophe* as subgenus, primarily VOCKEROTH (1969), later STUBBS & FALK (1983) and DOCZKAL & SCHMID (1994). But VOCKEROTH (pers. comm.) admits that treating the separate genus *Epistrophella* is acceptable. On the other hand HIPPA (1968) described this taxon independently as subgenus of genus *Meligramma* FREY, 1946 (as synonym *Zimaera*). It was adopted by ROTHERAY (1993, 1999). The taxon *Epistrophella* is cited as a separate genus by SPEIGHT & LUCAS (1992) and TORP (1994).

Presently 17 Palaeartic species are included in the genus *Epistrophe* s str., 12 species are known from Europe. Immature stages have been described for five European species. Four of them were studied by the authors and redescribed. Immature stages of the species *E.leiophthalma* (SCHINER & EGGER, 1853), which were described by GOELDLIN DE TIEFENAU (1974), have not been possible to obtain and it was included only in the key using the GOELDLIN's description. Immature stages of the next three species are described for the first time.

MATERIAL AND METHODS

Larvae of the third stage and empty puparia were studied. Part of material was obtained from the aphid colonies in the field and part was reared in the laboratory from the eggs of caught gravid females. Undeterminated larvae from the aphid colonies were photographed in colour and reared into imagoes. The caught gravid females were put in separated boxes with plantlet of *Faba vulgaris* previously infested by aphid *Acyrtosiphon pisum*. The methodology of laboratory breading of aphid was assumed from Department of entomology of AV ČR in České Budějovice. Part of obtained larvae was put into alcohol, part was lyophilised and part was reared into eventual imagoes (if it was successful). Diapausing larvae were put in fridge with decreased temperature (min –5°) in the end of summer. In the middle of January larvae were put in increased temperature and in 13h photoperiod (later 16h). The posterior respiratory process of puparia or lyophilised larvae of each species was photographed by scanner electron microscopy.

As for terminology the authors follow previous terms used by DUŠEK & LÁSKA (1964). The authors use the term orificium (VIMMER, 1925) instead of spiracles or slits, the term periorificial ornamentation is used in analogy of fundamental work of BHATIA (1939) instead of interspiracular ornamentation. Abbreviation: PRP – posterior respiratory process.

Description of immature stages of the genus *Epistrophe* s str.

Fully developed larvae very flat and regularly oval in outline; body length 8.5–14.1 mm, width 4.2–5.5 mm, high about 2 mm; segmental wrinkles on dorsal side distinct; lateral margins with rounded to toothed lobes (Figs 1–3).

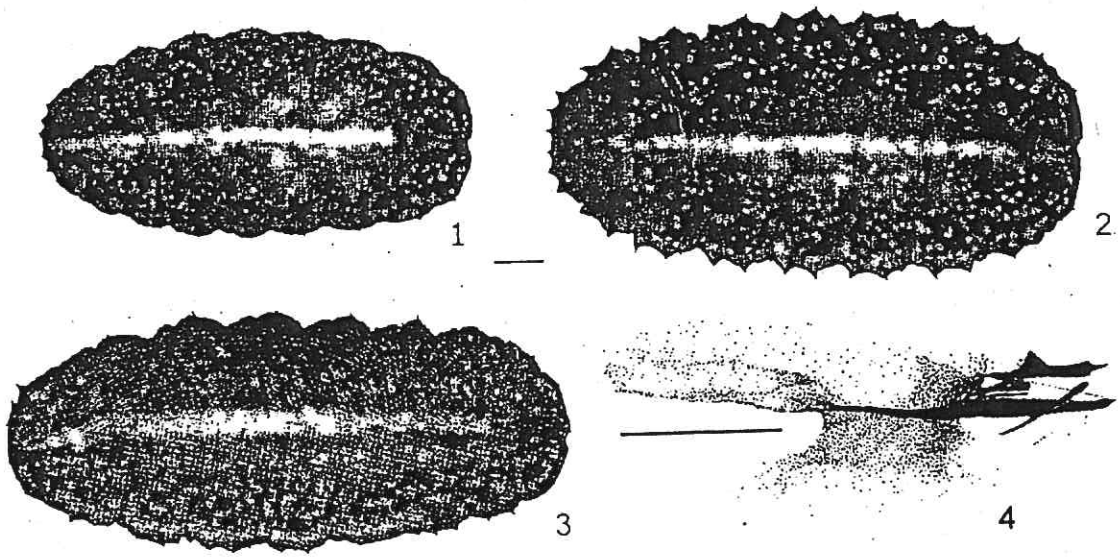
Basal colour usually greenish (*E.cryptica* is an exception) with whitish mid-dorsal stripe and spread whitish grains; green colour is changing usually towards to orange-brownish during diapause.

Each typical segments (4^{th}–10^{th}) wear together 6 pairs of segmental spines; lateral segmental spines (4^{th}–6^{th} pairs) on each segment mainly good visible from above, with tendency line in a row on margins; 1^{st}–3^{rd} segmental spines of 3^{rd} segment form anterior margin of larvae and usually little longer than other spines. Anal segment (11^{th} segment) with one pair of fully developed lateral segmental spines and with rest of 1^{st} segmental spines usually hard visible; segmental spines about 0.08–0.14 mm long, apical part 0.04–0.08 mm narrow, basal part 0.03–0.07 mm broad. Spines can be placed also on erected fleshy papillae, segmental spines are in integument colour or darker especially in apical part; integumental vestiture absent, dorsum covered with small nodules or almost flat.

PRP (photos 1–12) pale to dark brown, rather big and broad in correlation with species and specimens size, length 0.7–1.1 mm (measured from base to point of dorsal spur). Basal width 0.55–0.82 mm, apical width 0.44–0.7 mm, narrowed under spiracular part; orificium I and III diverging by almost 180°; orificium II closer to orificium III than to orificium I; orificia on low carinae, reaching over sides of spiracular plate; periorificial ornamentation mostly robust, irregularly nodular usually higher than carinae, periorificial setae reduced to a pair between medial ends of orificium I and II; dorsal spur well developed rather irregular, 0.02–0.08 mm high; surface of PRP with more or less extended nodules in basal part and in apical 0.34–0.44 mm with small pits; wrinkled border often presents between these surfaces.

Anal papillae divided into two lobes near base, lobes about 0.3–0.4 mm long and 0.12–0.14 mm wide; cephalopharingeal skeleton similar to other aphidophagous species (Fig.4).

Puparium (Figs 5–15): Anterior half inflated and rather concave posteriorly in lateral view; outline elliptic to ovate from above; colour light brown exceptionally with dark pattern; length (without PRP) 6.5–8.8 mm, maximal width 3.4–4.7 mm, maximal high 2.9–3.9 mm.



Figs 1–4: 1–3: Third instar larvae from above: 1 – *E.eligans*, 2 – *E.nitidicolis*, 3 – *E.flava*. Scale 1 mm. 4 – cephalopharingeal skeleton of *E.flava*. Scale 0.1 mm.

Note: Young larvae including active larvae of the third stage are not oval and flat. They are tapering anteriorly and with higher body similar to larvae of related genera – *Syrphus*, *Leucozona*. During maturing larvae become flat, the front segments are pulled in body and overlaid by increase rim of 3rd segment with segmental spines.

Differential diagnosis: Similarly oval and flat as larvae of the genus *Epistrophella*, but it differs in colour pattern, in margin of larvae or puparia, in length of PRP and in presence of dorsal spur. In these larval characters it differs also from related genus *Afrosyrphus* CURRAN (LÁSKA et al. 2000).

It differs from the genera *Syrphus* FABRICIUS and *Leucozona* SCHINER in colour pattern, in more extended periorificial ornamentation and in rather concave puparium posteriorly. It differs from the genus *Syrphus* in longer PRP with basal nodular part and in position of lateral segmental spines. It differs from larvae of the genus *Leucozona* in reduced 1st segmental spines on anal segment.

E.cryptica DOCZKAL & SCHMID, 1994 (Photos 3, 4)

(Previously undescribed)

Larvae pale without green colour, in general appearance whitish, mid-dorsal stripe whitish broad about 25 % of wide of larvae, whitish grains numerous, more conspicuous in diapausing larvae; body length about 11 mm, width about 5 mm (reared in laboratory); lateral margin of larva with rounded marginal lobes; segmental spines about 0.08–0.09 mm long (apical 0.04–0.05 mm narrow) of the same colour as integument, 1st segmental spines of 11th segment reduced to small papillae about 0.02–0.03 mm high; integumental vestiture absent, surface almost flat paved on dorsum and nodular on margins.

PRP length 0.92–1.06 mm, basal width 0.74–0.82 mm, apical width 0.63–0.7 mm, minimal width under spiracular portion 0.5–0.6 mm; surface of PRP irregularly nodular in about basal 0.48–0.68 mm, wrinkled border on distal margin of nodular part usually inexpressive; spiracular plate about 0.4–0.44 mm high, dorsal spur 0.05–0.06 mm high, medial ends of orificium I and III close, periorificial ornamentation robust of triangular shape, irregularly nodular, higher than carinae.

Puparium: Not examined.

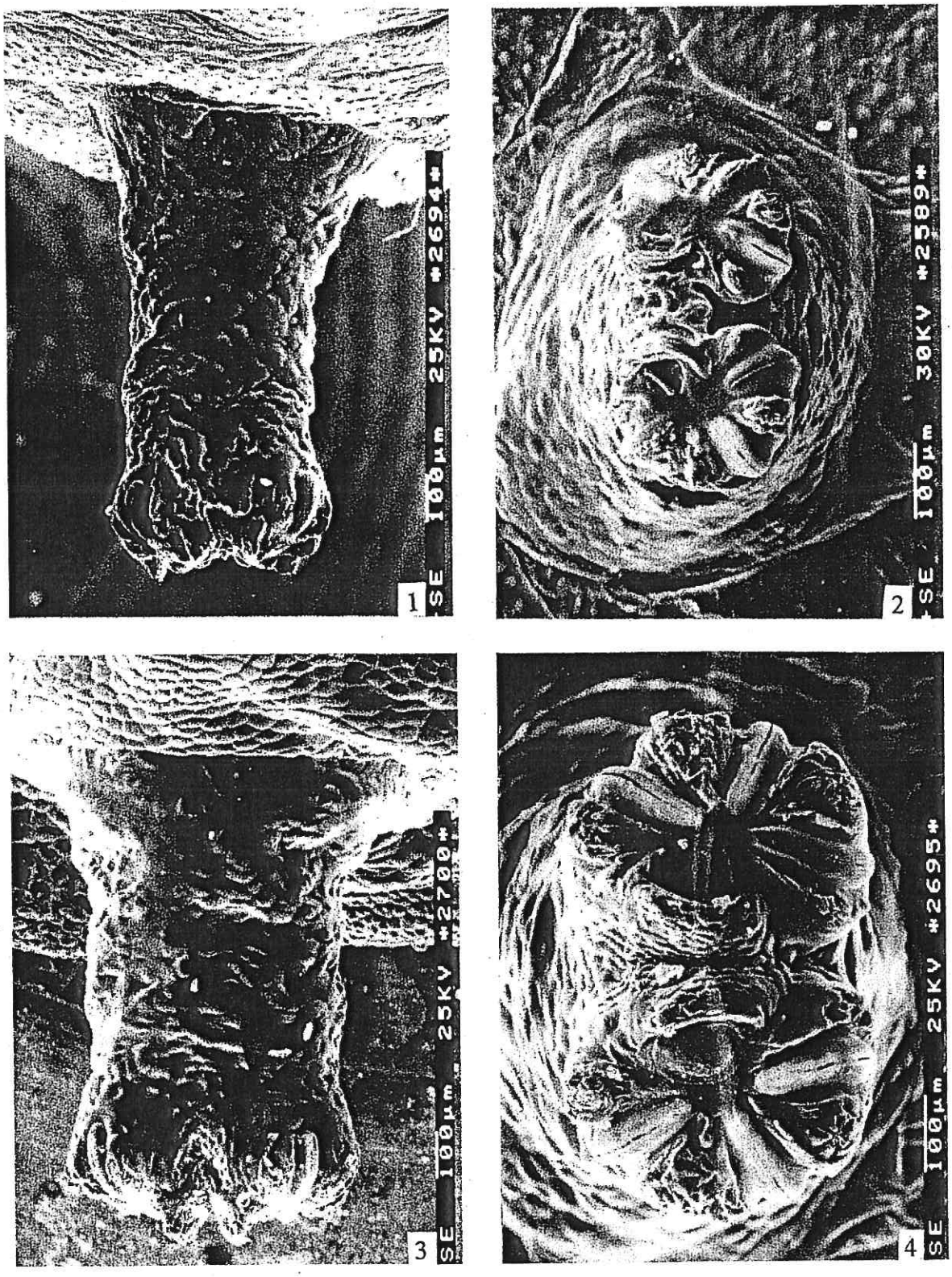
Material examined: About 20 larvae were reared in laboratory from eggs of gravid female (Czech Republic, Vyžice, 1.v.1999; 6.–11.v.1999 – laid eggs in small groups of 4–7 eggs and also separately, 9.v.1999 – first larvae, 19.v.1999 – larvae depressed, from 21.v.1999 larvae in diapause. All diapausing larvae died during winter.)

E.diaphana (ZETTERSTEDT, 1843) (Figs 12, 13; Photos 7, 8)

(Previously undescribed)

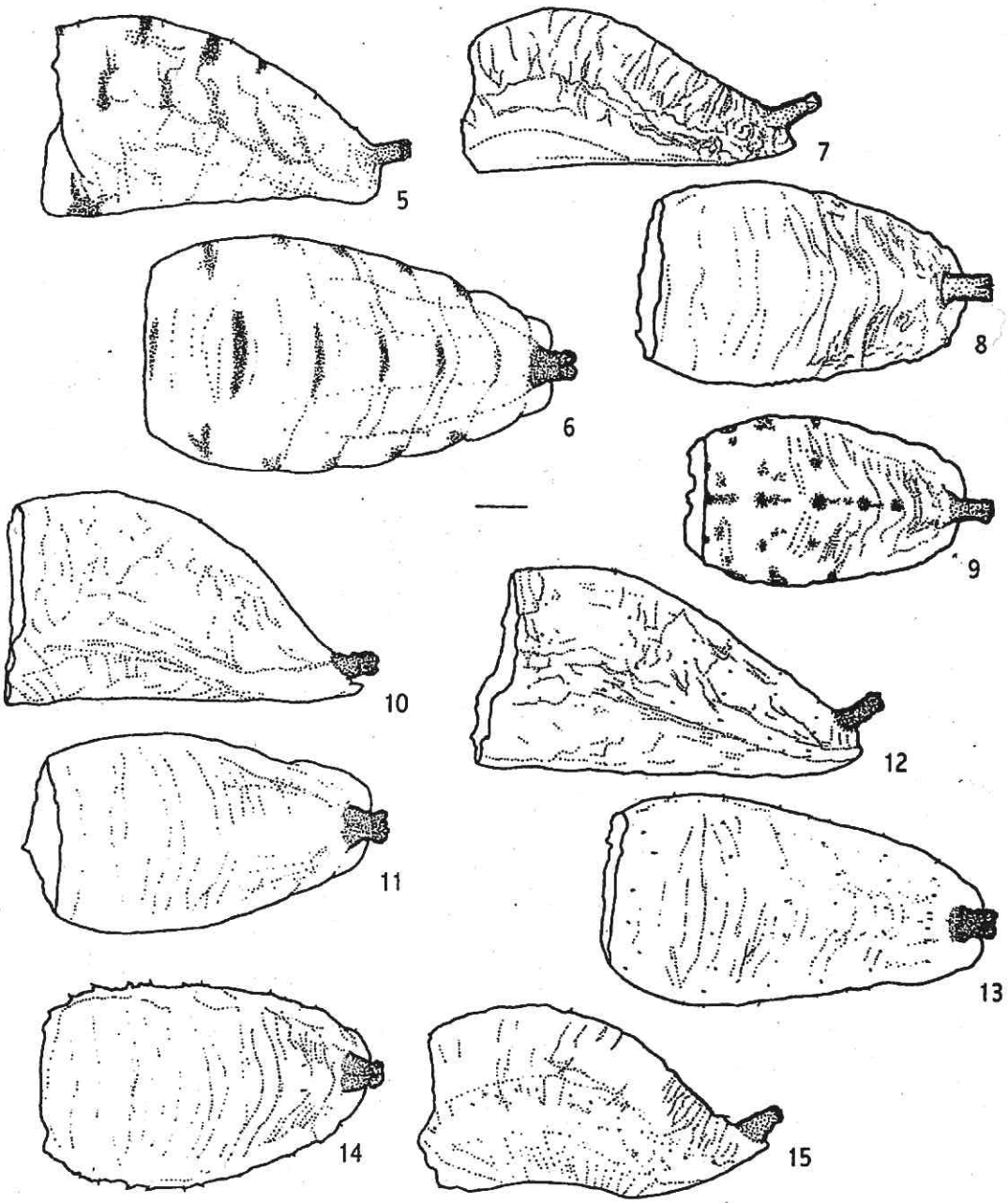
Basal colour of larvae pale greenish, whitish mid-dorsal stripe with vague outline, very broad about 30–40 % of wide of larva, whitish grains very numerous; body length about 11.8 mm, width about 4.6 mm; lateral margin of larva with rounded marginal lobes; segmental spines about 0.08–0.1 mm long (apical 0.04–0.06 mm narrow), darkened apically, 1st segmental spines of anal segment reduced to small papillae 0.02 mm high; integument nodular.

PRP dark brown, length about 0.9 mm, basal width about 0.6 mm, apical width about 0.5 mm, minimal width (under spiracular portion) 0.4–0.48 mm; surface of PRP



Photos 1–4: Posterior respiratory process (1, 3 – from above; 2, 4 – spiracular plate). 1, 2 – *E.eligans* (larva). 3, 4 – *E.cryptica* (larva).

irregularly nodular in about basal 0.5 mm, wrinkled border on distal margin of nodular part absent; spiracular plate about 0.33 mm high, dorsal spur about 0.08 mm high, medial ends of orificium I and III distant, periorificial ornamentation robust, irregularly nodular, distinctly higher than carinae, nodules between orificium II and III the most developed, circular.



Figs 5–15: Puparia of *Epistrophe* species (5, 7, 10, 12, 15 – lateral view; 6, 8, 9, 11, 13, 14 – dorsal view): 5, 6 – *E.melanostoma*. 7–9 – *E.eligans*. 10, 11 – *E.flava*. 12, 13 – *E.diaphana*. 14, 15 – *E.nitidicollis*. Scale 1 mm.

Puparium: Outline without rest of fleshy papillae from above, equally tapered posteriorly in lateral even dorsal view; length about 8.4 mm, width about 4.1 mm, high about 3.9 mm; colour light brown, segmental spines darkened, PRP dark brown.

Material examined: Three larvae were collected on aphid colony of *Uroleucon cichorii* on *Cichorium intybus* (Daskabát, 25.vi.1999; from 29.v.1999 was reared laboratory, 9.vii.1999 – one larva was put in alcohol, 20.vii.1999 – two larvae pupated, 31.vii.1999 – emerged male of *E.diaphana*, second pupa died.)

E.eligans (HARRIS, 1780) (Figs 1, 7–9; Photos 1, 2)

Previously described by DE MEIJERE (1916), KRÜGER (1926), BRAUNS (1954), DIXON (1960), DUŠEK & LÁSKA (1961), GOELDLIN DE TIEFENAU (1974).

Basal colour of larvae green, median area paler yellowish to brownish, whitish mid-dorsal stripe narrow less than 10 % of wide of larva, whitish grains present in moderate number; body length about 8.5–11.5 mm, width about 4.3–5 mm; lateral margin of larva with rounded marginal lobes; segmental spines about 0.08–0.1 mm long (apical 0.05–0.07 mm narrow) in integument colour, 1st segmental spines of anal segment completely reduced; integument nodular.

PRP pale brown apical tip darker, length 0.09–0.14 mm, basal width 0.55–0.7 mm, apical width 0.44–0.54 mm, minimal width under spiracular portion 0.37–0.44 mm; surface of PRP on basal 0.55–0.75 mm nodular, wrinkled border on distal margin of nodular part vague; spiracular plate about 0.27 mm high; dorsal spur about 0.04–0.06 mm high, periorificial ornamentation robust of triangular shape, irregularly nodular, higher than carinae.

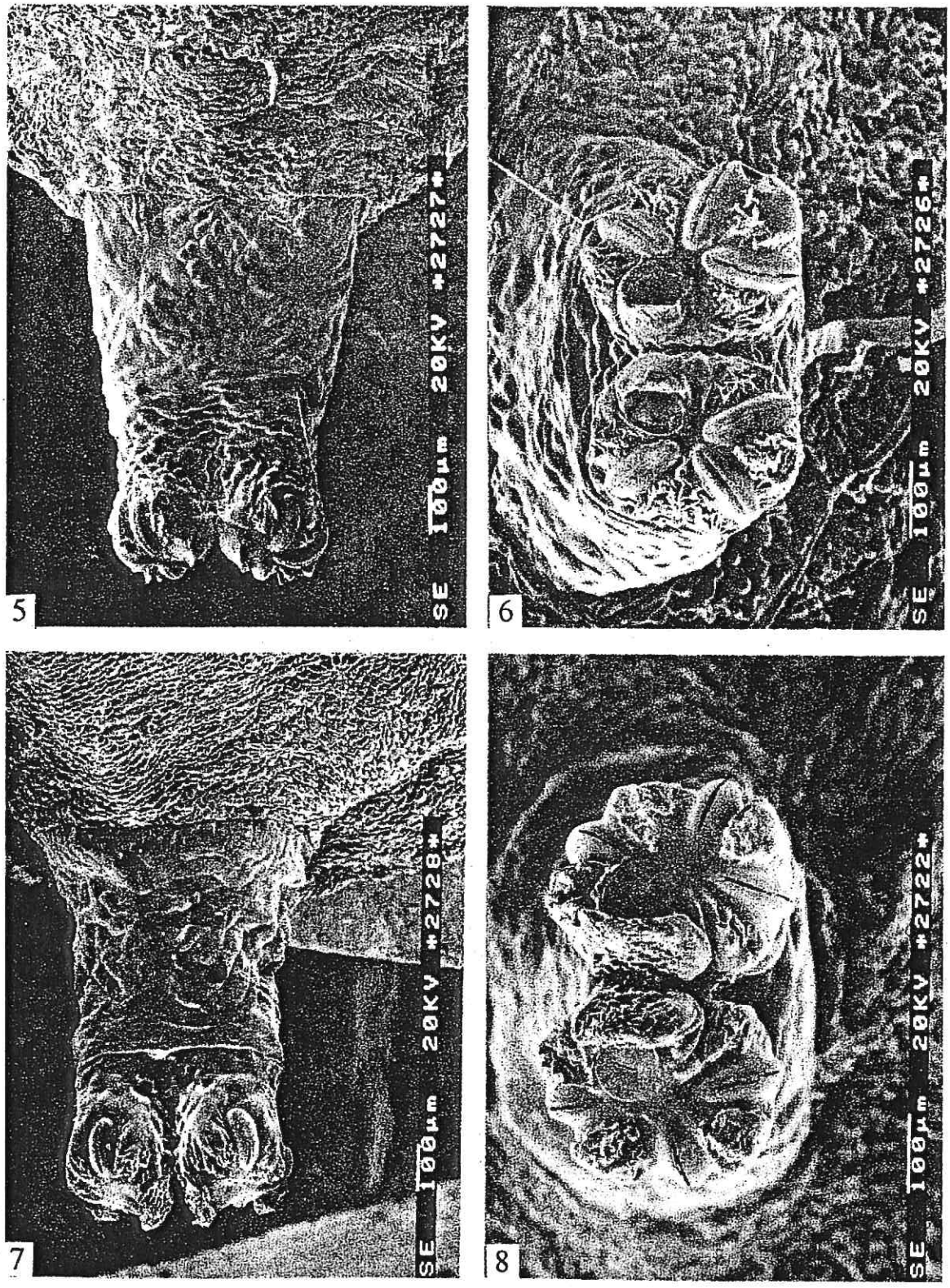
Puparium: Outline without rest of fleshy papillae from above, a little concave posteriorly in lateral view; length 6.7–7.1 mm, width 3.6–4.1 mm, high 3.1–3.2 mm; colour light brown often with darker patters, PRP light brown.

Material examined: Plenty of larvae and puparia were reared from eggs of several gravid females and from samples of colonies of *Myzus cerasi* on *Prunus avium* (Holice u Olomouce, 18.v.1961; Stav 26.v.1959; Praha Dejvice, 21.v.1961), of *Aphis sambuci* on *Sambucus nigra* (Žlunice, 1.vi.1959), of *Brachycaudus helichryzi* on *Prunus domestica* (Hlubočepy, 30.v.1957), on aphid colonies on *Prunus* sp. (Praha Trója, 19.v.1957), on *Spirea van-hutei* (Olomouc, 3.v.1999) and on *Rubus idaeus* (Přesypy u Rokytna, 26.v.1999).

E.flava DOCZKAL & SCHMID, 1994 (Figs 3, 4, 10, 11; Photos 9, 10)

Previously described by GOELDLIN DE TIEFENAU (1974), under name *E.ochrostoma*.

Basal colour of larvae greenish, whitish mid-dorsal stripe narrow less than 10 % of wide of larva, whitish grains present in somewhat less number; body length about 11–12.5 mm, width 4.2–4.9 mm; lateral margin of larva with rounded marginal lobes, but thin pointed papillae wearing lateral segmental spines are present (Fig.3); segmental spines about 0.11–0.14 mm long (apical 0.06–0.09 mm narrow) in integument colour or lightly darkened, lateral segmental spines of anal segment little smaller (0.06–0.08 mm), 1st segmental spines of anal segment about 0.04–0.06 mm long; integument nodular.



Photos 5–8: Posterior respiratory process (5, 7 – from above; 6, 8 – spicacular plate). 5, 6 – *E.nitidicollis* (puparium). 7, 8 – *E.diaphana* (puparium)

PRP brown, length 0.74–0.84 mm, basal width 0.68–0.78 mm, apical width 0.58–0.69 mm, minimal width under spiracular portion 0.52–0.58 mm; basal part of PRP (about 0.35–0.48 mm) almost without nodules except on extreme base, distal margin of that part of PRP usually with distinct wrinkled rim; spiracular plate 0.33–0.4 mm high; dorsal spur 0.04–0.06 mm long, medial ends of orificium I and III close; periorificial ornamentation robust of triangular shape, irregularly nodular, usually higher than carinae.

Puparium: Outline without rest of fleshy papillae from above, a little concave near posterior end in lateral view; length about 8 mm, width 4.1–4.7 mm, high 3.7–3.8 mm; colour light brown, PRP darker than integument.

Material examined: About 50 larvae were reared from eggs of caught gravid female (Czech Republic, Svatý Kopeček, 13.v.2000; 15.–18.v.2000 – eggs, 19.v.2000 – first larvae, 27.v.2000 – depressed larvae and part of them movement, 7.vi.2000 – all in diapause). Several imagoes were reared from overwintering larvae from samples of aphid colonies of *Uroleucon cichorii* on *Cichorium intibus* (Daskabát, 25.vi.1999), of *Aphis fabae* on *Cirsium arvense* (Nová Paka, 26.vi.1959), of aphid colonies on *Cirsium arvense* (Štrba, 1350m, 29.vi.1959) and on *Cirsium* sp. (Černovír, 10.vi.1999).

E.grossulariae (MEIGEN, 1822) (Photos 11, 12)

Previously described by ROTHERAY (1986, see also discussion).

Basal colour of larvae green, whitish mid-dorsal stripe narrow less than 10 % of wide of larva; body length 11–15 mm, width 3.5–5.5 mm; lateral margin of larva with rounded marginal lobes; segmental spines 0.09–0.11 mm long (apical 0.04–0.06 mm narrow), 1st segmental spines of anal segment unseen; integument nodular.

PRP brown, length about 0.7 mm, basal width 0.66 mm, apical width 0.58 mm, minimal width under spiracular portion 0.53 mm; basal part of PRP (about 0.3 mm) almost without nodules except at extreme base, distal margin of that part with expressive wrinkled rim; spiracular plate 0.34 mm high, dorsal spur about 0.05 mm high; periorificial ornamentation robust of triangular shape, as high about as carinae.

Puparium: Not examined.

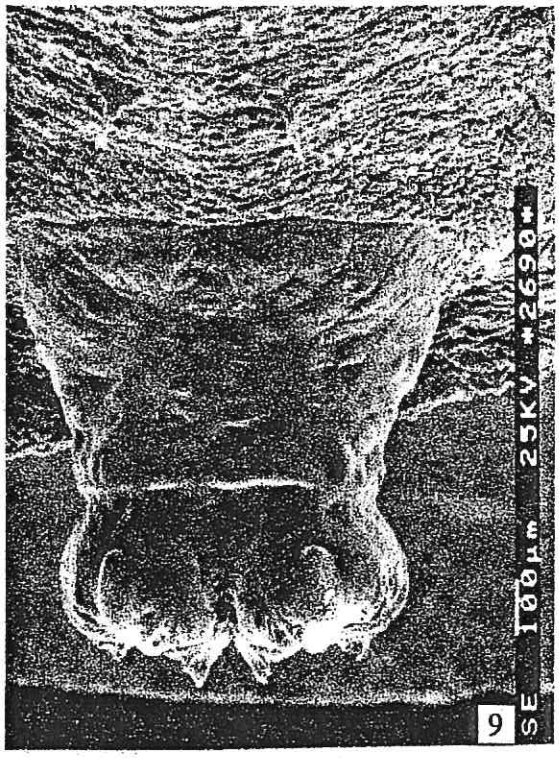
Material examined: One larva (Colinton, Edinburgh, Scottland, *Acer* aphids) stored in alcohol and det. 1984 by G. Rotheray.

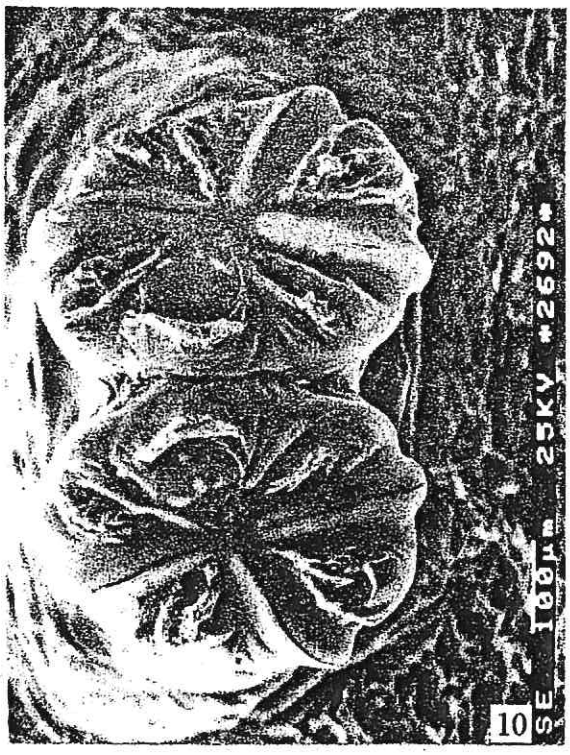
E.melanostoma (ZETTERSTEDT, 1843) (syn. *melanostomoides*) (Figs 5, 6)

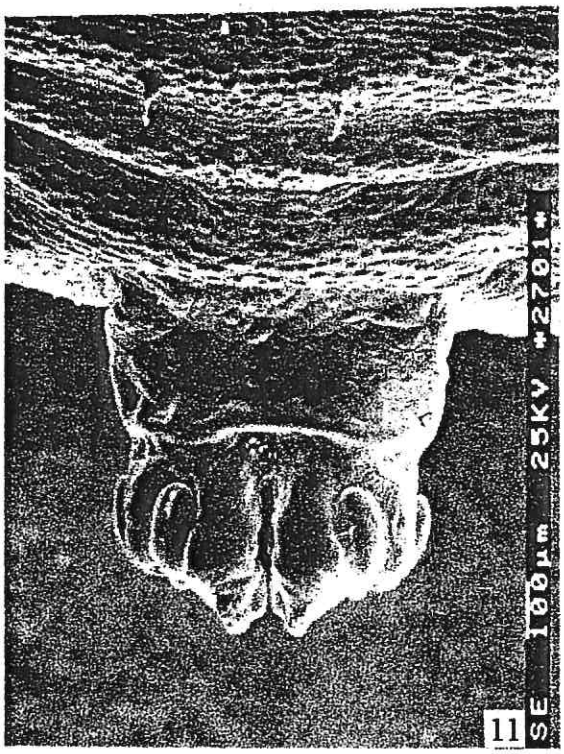
(Previously undescribed)

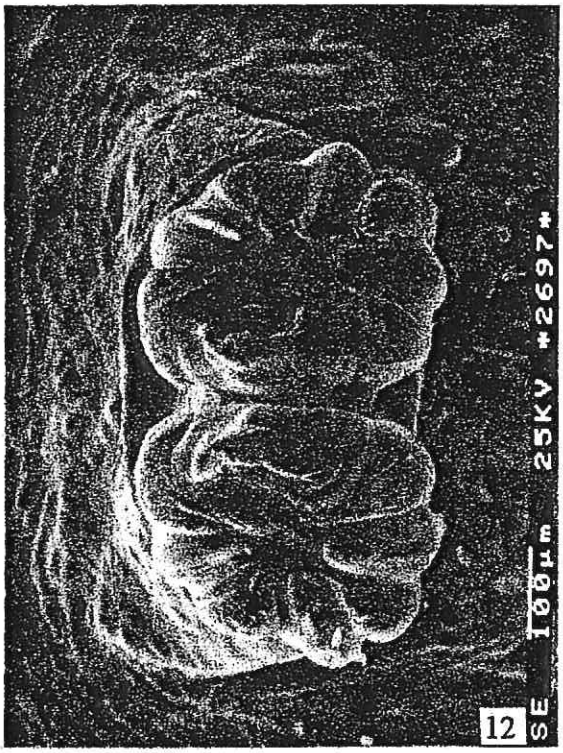
Basal colour of larvae greenish, whitish mid-dorsal stripe narrow less than 10 % of width of larva, whitish grains present in moderate number; body length about 8.1–11 mm, width about 4.2–4.6 mm; lateral margin of larva with rounded marginal lobes; segmental spines about 0.08–0.1 mm long (apical 0.04–0.05 mm narrow) in integument colour or lightly darkened, 1st segmental spines of anal segment reduced to small papillae; integument nodular.

PRP brown, similar to PRP in *E.cryptica* (Photos 3, 4), but smaller in size, length about 0.74–0.9 mm, basal width 0.64–0.71 mm, apical width 0.56–0.58 mm, minimal









Photos 9–12: Posterior respiratory process (9, 11 – from above; 10, 12 – spiracular plate). 9, 10 – *E.flava* (puparium). 11, 12 – *E.grossulariae* (larva).

width under spiracular portion 0.48–0.52 mm; basal 0.38–0.5 mm of PRP nodular with wrinkled distal margin; spiracular plate about 0.33 mm high, dorsal spur 0.02–0.05 mm high, medial ends of orificium I and III rather close, periorificial ornamentation robust of triangular shape, irregularly nodular, as high as carinae.

Puparium: Outline crimped posteriorly without rest of fleshy papillae from above; usually not concave on posterior part in lateral view; length 7–8.8 mm, width 3.7–4.1 mm, high 3.2–3.7 mm; colour light brown with dark pattern PRP little darker than integument.

Material examined: Several adults were reared from overwintering larvae from samples of aphid colonies of *Aphis fabae* on *Euonymus europea* (Černovír, 8.v.1999; 21.v.1999 – larvae movement, from 29.v.1999 in diapause), of *Aphis sambuci* on *Sambucus nigra* (Čánka u Opočna, 1.vi.1959) and of *Dactynotus* (*Uromelan*) *macrosyphon* on *Carduus personata* (Pec pod Sněžkou, 800m, 12.vii.1959). Empty puparia from Schneider's collection numbered 3010, 3011, 3025, 3028, 3031, 3087, 3038, 3089, imagoes were not available to examine by us. They were determined as *E.melanostomoides* by SCHNEIDER (1948).

E.nitidicollis (MEIGEN, 1822) (Figs 14, 15; Photos 5, 6)

Previously described by DUŠEK & LÁSKA (1959), DIXON (1960), GOELDLIN DE TIEFENAU (1974).

Basal colour of larvae greenish, whitish mid-dorsal stripe narrow less than 10 % of width of larva, whitish grains present in somewhat less number; body length about 9.5–10.7 mm, width about 4.7–5.3 mm; lateral segmental spines mounted on pointed fleshy papillae; segmental spines about 0.12–0.14 mm long (apical 0.05–0.07 mm narrow) in integument colour, lateral segmental spines of anal segment about 0.1 mm long, 1st segmental spines of anal segment 0.07–0.08 mm long (apical 0.03–0.04 mm narrow); integument nodular.

PRP pale brown darker in apical part, length about 0.76–0.96 mm, basal width 0.64–0.76 mm, apical width 0.48–0.54 mm, minimal width under spiracular portion 0.44–0.5 mm; surface of PRP on basal 0.46–0.58 mm nodular, wrinkled border on distal margin of nodular part usually distinct, spiracular plate about 0.27–0.33 mm high; periorificial ornamentation developed of triangular or oval shape, irregularly nodular, usually higher than carinae.

Puparium: Outline with rest of fleshy papillae from above, a little concave posteriorly in lateral view; length about 7.3–8.1 mm, width 3.9–4.5 mm, high 3.0–3.6 mm; colour light brown, PRP little darker.

Material examined: Seven larvae were reared from eggs of caught gravid female (Doloplazy u Olomouce, 9.v.1999; 11.v.1999 – eggs, 13.v.1999 – first larvae, 3.vi.1999 – all flat and movement larvae stored in alcohol). Several imagoes were reared from larvae from samples of aphid colonies of *Brachycaudus helichrysi* on *Prunus domestica* (Vrchovina, 4.vi.1959), of *Aphis sambuci* on *Sambucus nigra* (Žlunice, 1.vi.1959), of *Myzus cerasi* on *Cerasus avium* (Stav, 4.vi.1959; Malý Kosíř, 17.v.2000), of *Aphis* sp. on *Carduus crispus* (Žlunice, 30.vi.1959), from aphid colonies on *Acer pseudoplatanus* (Hrubá Voda, 12.v.1999), on *Spirea van-hutei* (Olomouc, 3.vi.1999) and on *Rubus idaeus* (Přesypy u Rokytna, 26.v.1999).

Key to third stage larvae and puparia of the genus *Epistrophe* s. str.

1 PRP about two times or more longer than minimal width under spiracular portion (Photos 1, 7), larva with green colour and with rounded marginal lobes 2
- PRP shorter and wider, less than two times longer than minimal width under spiracular portion (Photos 3, 5, 9, 11); larva with green colour or completely white, with rounded or toothed marginal lobes 4

2(1) PRP about two times or more longer than maximal width of apical part (Photo 1) ..... ***E.eligans***
- PRP shorter, less than two times longer than apical width (Photo 7) 3

3(2) Periorificial tubercles large higher than carinae, segmental spines darker than integument, medial ends of orificium I and III distant (Photo 8) .... ***E.diaphana***
- Periorificial tubercles smaller, segmental spines in integument colour, medial ends of orificium I and III close ..... ***E.leiophthalma***

4(1) Lateral margin of larva with toothed marginal lobes (Fig.2), outline of puparium with visible rest of fleshy papillae bearing lateral segmental spines (Fig.14), anal segment with two pair of well developed segmental spines, PRP gradually narrowing towards apex (Photo 5) ..... ***E.nitidicollis***
- Lateral margin of larva with rounded marginal lobes (Figs 1, 3), puparium without rest of fleshy papillae on margins (Figs 6, 11), 1st segmental spines of anal segment reduced, PRP not so gradually narrowing (Photos 3, 9, 11) 5

5(4) PRP approximately as long as basal wide (Photos 9, 11), larvae with green colour, puparium without pigmentation (Figs 10, 11) 6
- PRP distinctly longer than its basal wide (Photo 3), colour green or white 7

6(5) Segmental spines long, about 0.11–0.14 mm, base of PRP broadened (Photo 9) .. .. ***E.flava***
- Segmental spines shorter, about 0.09–0.11 mm, base of PRP less broadened (Photo 11) ..... ***E.grossulariae***

7(5) Larva with green colour, integument covered with nodules in dorsal part (similar as in Photos 1, 11), puparium with dark pattern ..... ***E.melanostoma***
- Larva white, without green colour, integument paved without nodules in dorsal area (Photo 3) ..... ***E.cryptica***

DISCUSSION

New descriptions of larvae support the monofyletic origin of the taxon *Epistrophe* s.str. However, the larva of *E.grossulariae* was quite different from other species in genus according to the first description by DIXON (1960). Later authors unsuccessfully tried to find differences also in imaginal characters (VOCKEROTH, 1969). ROTHERAY (1986) wrote that DIXON's description had been misidentified and that the larva of

E.grossulariae is similar to other larvae of the genus *Epistrophe*. According to the ROTHERAY's description the larva of *E.grossulariae* is similar to the larva of *E.flava*. It was accepted that the morphology and colouring of the larvae of all *Epistrophe* s.str. species are probably uniform. However, new described larva of *E.cryptica* is completely without green pigmentation and also structure of dorsal integument is unique in genera. This apomorphic adaptation is probably in correlation with special natural biotope. That is probably the reason why these larvae were not found in aphid colonies among other *Epistrophe* larvae.

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