

CESARE CONCI & LIVIO TAMANINI

ARYTAINILLA SPARTIICOLA FROM PUGLIA,
NEW FOR ITALY
(Homoptera Psylloidea)

1. THE GENUS ARYTAINILLA LOGINOVA, 1972

The genus *Arytainilla* was described as a subgenus of *Arytaina* by RAMIREZ GOMEZ 1956 (p. 76), but it was invalidated because without designation of type species (LOGINOVA 1972: 17); therefore the Author of the genus is LOGINOVA 1972, who fixed as type species *Psylla delarbraei* Puton, 1873. Its synonym is *Spartina* HESLOP-HARRISON, subgenus 1951, genus 1961 (p. 417), *nomen preoccupatum* (LOGINOVA 1972: 17).

Psylla delarbraei Puton, 1873 (pp. 21-22) (nec *delarbraei*!) has as type locality France (Cantal, Lioran). This species was found again, in France, only by LAMBERTIE (1901: 220 and 1910: 96) on Hautes-Pyrénées. The reports for Spain (CHICOTE 1880: 202 and RAMIREZ GOMEZ 1956: 77-79), reported also in the subsequent Catalogues, are very doubtful. The host plant of *Psylla delarbraei* was recorded as «*Genista Delarbraei* Lecoq. et Lam». Afterwards, this botanical binomial was considered «form» of *Genista tinctoria* L. (ROUY & FOUCAUD 1897: 236-237). Now, this taxon is accepted not even as a form; the name *delarbraei* is not reported in TUTIN 1968, *Flora Europaea*. Concerning *A. delarbraei*, only the original diagnosis and the redescription by SULC (1910: 1-4, pl. 3: 1-10) exist. The types are in the Muséum Nat. Histoire nat., Paris. It is impossible to know if the superficial description by RAMIREZ GOMEZ 1956 (pp. 77-79, figs. 8: 7-9; pl. 2: 21) refers to this species. ENDERLEIN (1921: 120) erroneously ascribed this species to his new genus *Asphagis*. *A. delarbraei* needs therefore a new complete redescription.

The genus *Arytainilla* includes now 18 species, limited to West Palaearctic. Four species for Morocco were described by LOGINOVA 1972; ten other species for Canary Islands and Madeira were described by LOGINOVA 1976. The four remaining species (*spartiophila*, *cytisi*, *delarbraei*

and *spartiicola*) live in Central, West and South Europe and have an older description. Our knowledge on Mediterranean Psylloidea is very scarce and therefore this situation will have great alteration in the future. The species of *Arytainilla* live, as far as we know, on *Leguminosae* of genera *Adenocarpus*, *Calicotome*, *Cytisus* and *Genista*. The host plant is unknown for 11 of the 14 species described by LOGINOVA!

Only two species of *Arytainilla* are known till now for Italy (*cytisi* and *spartiophila*).

A. cytisi (Puton, 1876: 284-285) (*Psylla Cytisi* PUTON 1875: 79, n. 51, is *nomen nudum*) was cited for Italy by PUTON 1876 (p. 285: Gênes, leg. Ferrari) and by FERRARI (1888: 75: Liguria, Genova-Borzoli) and it was afterwards reported for Italy in all Catalogues. We know many adults and nymphs of *A. cytisi* for Liguria, Puglie and Sicilia, on *Calicotome spinosa* (L.) Link and *C. villosa* (Poiret) Link, plants very abundant and widespread in the Mediterranean maquis vegetation. This species is cited for France, Italy and Yugoslavia; the report by RAMIREZ GOMEZ 1956 for Spain (pp. 79-81, figs. 9: 1-3, pl. 4: 3) appears to refer to another species.

A. spartiophila (Förster, 1848) (syn. *Psylla spartii* Guérin, 1843 nec Hartig, 1841) was cited so far for Italy only by BURCKHARDT (1983: 55), for Lombardia, Sondrio, Piano di Chiavenna. We collected this species with many adults specimens and with nymphs in: Lombardia, Como, S. Maria Hoé, m 450, 30.V.84; 15.VI.84; 21.VI.86. - Liguria, La Spezia, Varese Ligure, m 600, 9.VI.86. - Emilia-Romagna, Parma, Berceto, Passo della Cisa, m 900, 12.VI.83; idem, Tornolo, Santa Maria del Taro, m 800, 18.VI.85. - Toscana, Massa-Carrara, Zeri, m 1300, 12.VI.83. *A. spartiophila* was found in these localities on *Cytisus scoparius* (L.) Link, except the only specimens from Zeri. The same species was also collected by Riccardo in Piemonte, Torino, Castellamonte, 15.VI.80, and by N. Sanfilippo in Liguria, La Spezia, Sesta-Godano, M. Gottero, m 750, 31.V.86. On the whole, at present *A. spartiophila* is known in 5 Regions of North and Central Italy, in 8 localities, with 10 findings, between 450 and 1300 m, at the end of May and in June, in more than 400 specimens, generally on *Cytisus scoparius*. *A. spartiophila* (type locality Germany) is the species of the genus with the greatest diffusion: Great Britain, Ireland, Spain, France, Belgium, Holland, Denmark, Germany, Switzerland, Italy. The reports for Portugal, Czechoslovakia and Austria are erroneous.

2. ARYTAINILLA SPARTIICOLA (SULC, 1907)

2.1. Introduction

Arytainilla spartiicola (Sulc, 1907) is one of the rarest European Psyllids. The species was described, with a long and accurate diagnosis and good illustrations, by SULC (1907: 5-9, pl. 2: 1-10) as *Psylla spartiicola*, from one male and one female collected in France, Aude, and preserved in the Naturhistorisches Museum, Wien. ENDERLEIN (1926: 399) ascribed with doubt the species to his genera *Asphagidella* or *Asphagis*, attribution completely erroneous. HAUPT (1935: 234, figs. 459, 460) reported his findings at Krefeld. KLOET & HINCKS (1945: 60) reported the species for Great Britain. HESLOP-HARRISON (1951: 442, 453-454) stated that the record by KLOET & HINKS was erroneous and the one by HAUPT doubtful; the same Author, without examining specimens, wrote that the taxon is only a «local variant of the original species *spartii*», which he ascribed to genus *Arytaina* and to his new subgenus *Spartina*. LOGINOVA (1972: 17; 1977: 578; 1978: 64) ascribed it to the genus *Arytainilla*, but also the Russian Author did not see specimens of *spartiicola*. Lastly, BURCKHARDT (1983: 55) cited the species as new for Switzerland, with three new findings, sub *spartiisuga* [misprint].

2.2. Description of the adult

Our material corresponds satisfactorily to SULC's description. Terminology and symbols follow HODKINSON & WHITE 1979.

Morphology. Both sexes are similar in morphology and coloration, and differ in terminalia and size.

Head as in fig. 1. Vertex with an evident oval depression, on each half, more or less dark. Short genal cones, long about half as the length of the vertex, divergent from the base, with widely rounded apex; genal cones inclined downwards from the plane of the vertex and without the long hairs, characteristic for other species of *Arytainilla*. Antennae (figs. 2,3) long two times the width of the head, with a great rhinarium on each segment IV, VI, VIII, IX; the segment X has an evident sensorial organ, constituted by the shortest hair, enlarged and placed on a flat and light disk (fig. 3: B); another sensorial organ, like a very little rhinarium, is present immediately under the cited disk (fig.

3: C). It is necessary a magnification of almost 300 times in order to see these organs.

Thorax moderately convex and uniformly curved till the head. Pronotum narrower than the head. Forewings (fig. 4) with very reduced pterostigma; cell m_2 little, shorter than cu_1 , long about 1.5 times than its height. Microsculpture colourless, present on the whole surfaces of the wings, till the veins; the microsculpture is thinner and smaller on the upper surface; a slightly thicker microsculpture replaces the radular spinules. Hind wings (fig. 6) a little shorter than the forewings, without Cu_1 vein. Metatibiae (figs. 7, 8) with 4 (sometimes 5) black saltatorial spines at the apex; the first metatarsus (figs. 7, 9) has two different strong spines: the greatest is black and the other is little and clear, on inner side.

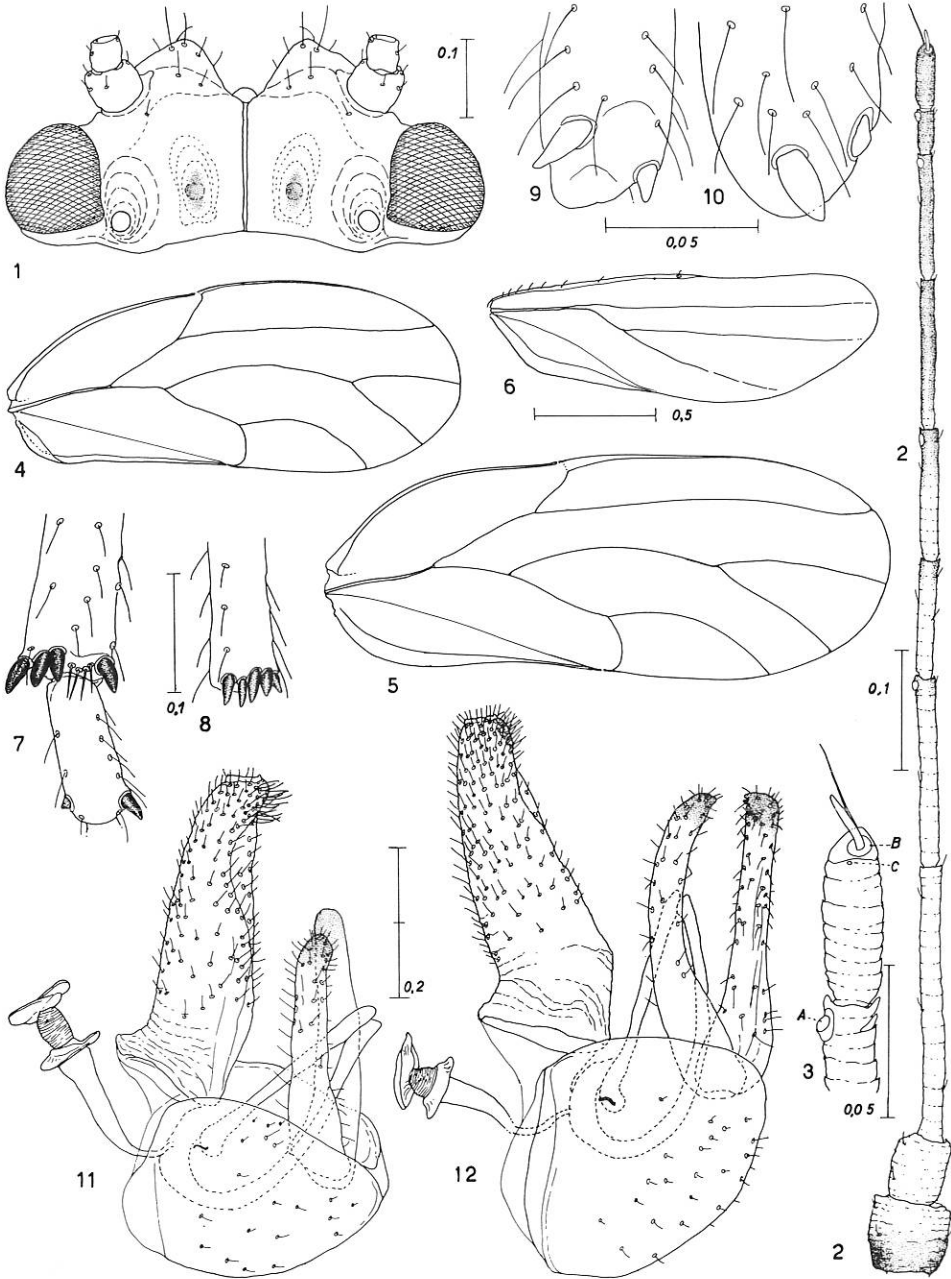
Male genito-anal complex as in fig. 11. Proctiger at the apex, on the posterior part, with a tuft of hairs longer than the others. Parameres (figs. 11, 13-17) long about $2/3$ than the proctiger; laterally straight, with subparallel sides; apex of parameres with a little point, visible with diagonal rotation of the parameres (fig. 16); posteriorly the parameres (figs. 15, 18) are curved, enlarged at the base. Penis (fig. 20) with slightly long apical part and with terminal spermatic duct externally protruded, a detail observed in all the specimens examined.

Female genito-anal complex (figs. 22-23) with proctiger much longer than the genital segment. Anal opening oval, surrounded with two lines of waxen glands (fig. 24). Valvulae and ovipositor (fig. 26) with slightly different length; the difference indicated in the figure is variable, but the parts are independent (in *A. spartiophila* the two parts are connected in a single point).

Coloration. Mature specimens with colour similar to *spartiophila*, but a little paler. General body coloration pale reddish brown with darker brown markings; antennae with pale segments III-IV; forewing membrane subtransparent in its proximal half and yellowish-brown in its distal part; abdomen dark brown, except the genital zone, more pale.

Figs. 1-4, 6-9, 11: *Arytainilla spartiicola*, specimens from Puglia, Monte Sant'Angelo. - 1: male, head. - 2: male, antenna. - 3: male, two last antennal segments; A, rhinarium of the IX segment; B and C, sensorial organs of the X segment. - 4: male, forewing. - 6: male, hind wing. - 7: apex of metatibia and first tarsal segment. - 8: apex of metatibia, with 5 saltatorial spines, of another specimen. - 9: metatarsus, with the two apical strong spines. - 11: male genito-anal complex.

Figs. 5, 10, 12: *Arytainilla spartiophila*, specimens from Lombardia, S. Maria Hoé. - 5: male, forewing. - Fig. 10: metatarsus. - Fig. 12: male genito-anal complex.



Newly hatched specimens yellowish, with pale basal half of the antennae and with forewing membrane transparent, with a light rusty colour.

Measurements, in mm, in comparison with *A. spartiophila*.

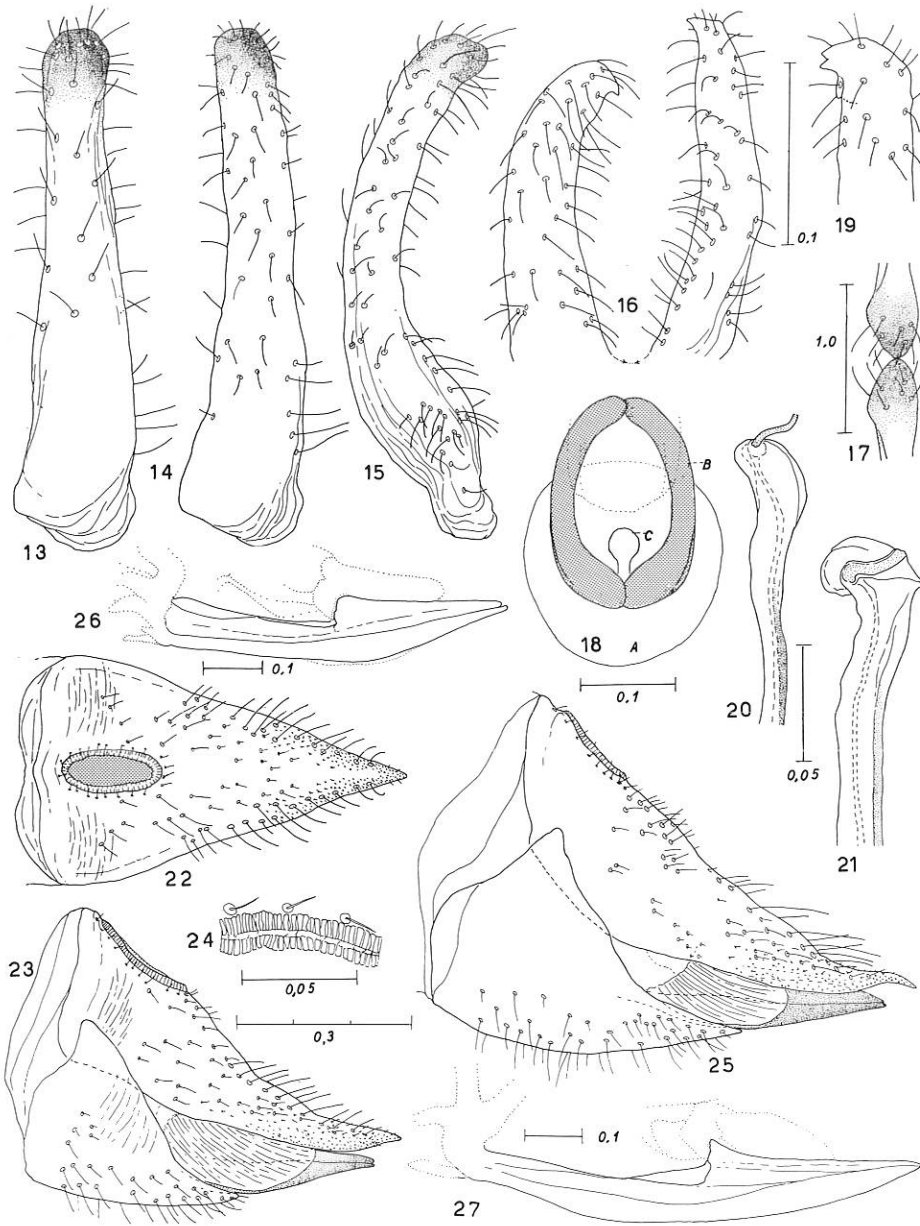
	<i>spartiicola</i>		<i>spartiophila</i>	
	male	female	male	female
Total length:	2.0-2.3	2.4-2.7	2.3-2.8	2.7-3.2
head width:	0.52-0.56	0.55-0.63	0.54-0.66	0.58-0.70
vertex length:	0.14-0.16	0.15-0.20	0.15-0.20	0.17-0.19
vertex-width:	0.32-0.37	0.31-0.41	0.35-0.43	0.37-0.43
genal cones length:	0.07-0.08	0.07-0.09	0.07-0.08	0.07-0.09
antennal length:	1.05-1.17	1.05-1.13	1.09-1.33	1.17-1.37
forewing length:	1.72-1.84	1.92-2.20	1.96-2.31	2.27-2.50
forewing width:	0.74-0.76	0.82-0.94	0.78-0.94	0.78-1.01

Ratios (l = length; w = width):

total l/head w:	3.88-4.14	3.97-4.43	4.21-4.23	4.50-4.66
genal cones l/vertex l:	0.50-0.59	0.40-0.50	0.44-0.45	0.42-0.44
antennal l/head w:	1.93-2.11	1.80-2.04	2.00-2.00	1.94-2.00
forewing l/forewing w:	2.42-2.58	2.29-2.45	2.45-2.50	2.46-2.90
forewing l/head w:	3.26-3.36	3.38-3.57	3.47-3.57	3.55-3.86

Figs. 13-18, 20, 22-24, 26: *Arytainilla spartiicola*, specimens from Puglia, Monte Sant'Angelo. - 13: left paramere, outer. - 14: right paramere, inner. - 15: paramere, posterior. - 16: parameres posterior, diagonally. - 17: apex of parameres, dorsal. - 18: parameres posterior, leaning on the proctiger; A, subgenital plate; B, parameres; C, junction of the two segments of the penis. - 20: penis. - 22: female genito-anal complex, dorsal. - 23: idem, lateral. - 24: a part of the ring of waxen glands surrounding the anal opening. - 26: valvulae and ovipositor.

Figs. 19, 21, 25, 27: *Arytainilla spartiophila*, specimens from Lombardia, S. Maria Hoè. - 19: right paramere, distal part, anterior, diagonally. - 21: penis. - 25: female genito-anal complex, lateral. - 27: valvulae and ovipositor.



2.3. Preimaginal stages (figs. 28-35)

The only species of *Arytainilla* of which preimaginal stages were published is *A. spartiophila* (WHITE & HODKINSON 1982: 25-26, figs. 66-67); we follow this work as regards terminology and symbols.

Egg (figs. 28-29) long oval, with a short and strong stalk and a thin micropyle. Length 0.27-0.30 mm; diameter 0.10-0.14 mm.

The egg of *spartiicola* has the stalk shorter and the micropyle more regular than the egg of *spartiophila* (figs. 38-41). The egg of *spartiophila* is 0.32-0.35 mm long and 0.12-0.13 mm wide.

Fifth instar nymph (figs. 30-35). We collected some nymphs of the last instars, together with the adults.

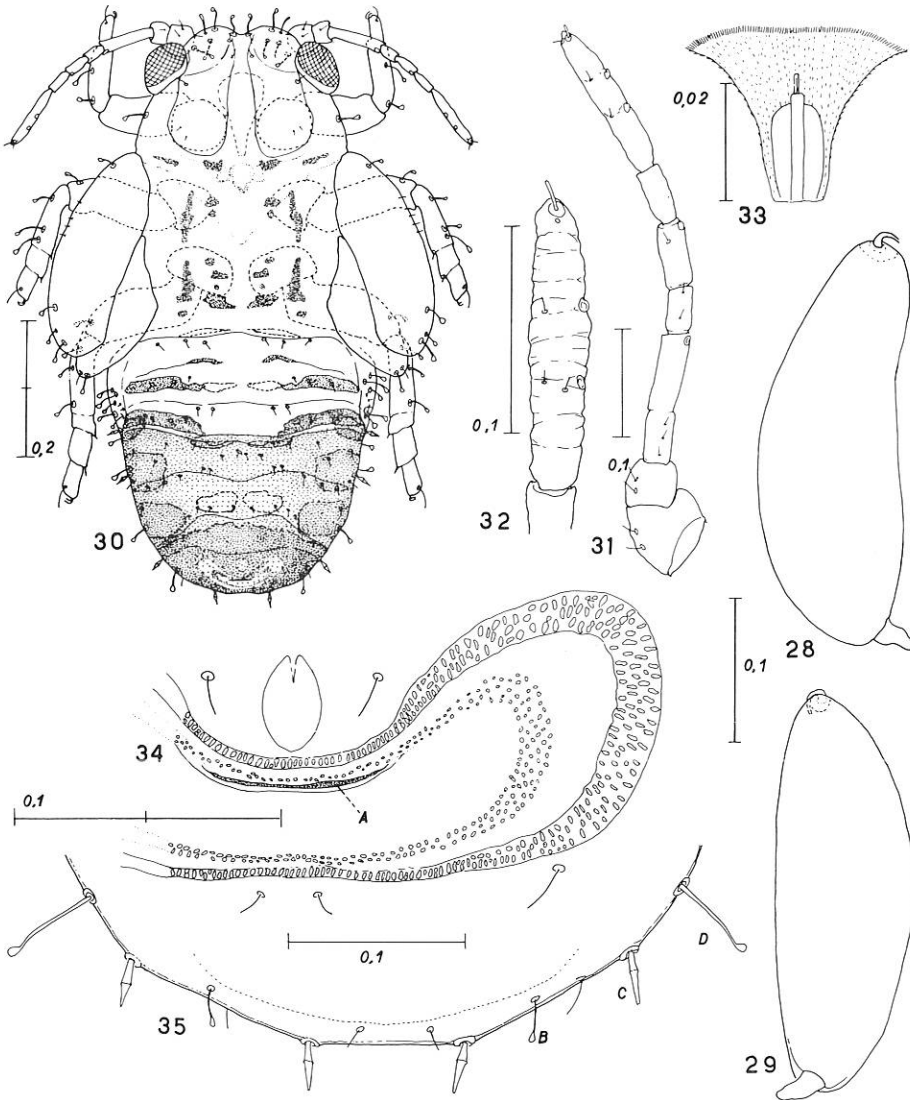
Morphology. Body (fig. 30) of typic psyllide aspect. Antennae (figs. 31-32) with seven segments, which correspond to segments I, II, III-IV, V, VI, VII and VIII-X of the adult; traces of definitive segmentation are visible. Four evident rhinaria. Triangular arolium (fig. 33). Anal opening (fig. 34) surrounded by two glandular rings; the external of which with some rows of pores; the inner is slenderer.

Chaetotaxy (figs. 30, 35) with capitate setae, pointed ringed sectasetae and short thin hairs. We report the number of setae, for each half of the body, and the comparison with the setae of *A. spartiophila*:

	<i>spartiicola</i>	<i>spartiophila</i>
head margin capitate setae	3	2
head lower capitate setae	2	—
prothorax margin capitate setae	1	—
forewing-pad margin capitate setae	3-5	4-5
hindwing-pad margin capitate setae	1-2	2
mesofemura capitate setae	1	1
metafemura capitate setae	1	1
protibiae capitate setae	1-2	—
mesotibiae capitate setae	3	3
metatibiae capitate setae	3-4	4
abdomen margin and dorsally near the margin capitate setae	6-9	17
abdomen margin pointed ringed sectasetae	4	4

The length of the capitate setae is 20-70 microns and the length of the pointed ringed sectasetae is 25-40 microns.

Coloration. General coloration pale green; dorsal and ventral sclerites uniform brown; antennae, legs and genital parts more or less dark brown.



Figs. 28-35: *Arytainilla spartiicola*, eggs and fifth instar nymphs, specimens from Puglia, Monte Sant'Angelo. - 28, 29: eggs. - 30: nymph, dorsal. - 31: right antenna, dorsal. - 32: last antennal segment. - 33: arolium. - 34: anal opening (A), with waxen rings, ventral. - 35: abdominal margin chetotaxy: A, simple hairs; B, pointed ringed setae; C, capitate setae; D, ...

Measurements, in mm, in comparison with *A. spartiophila*:

	<i>spartiicola</i>	<i>spartiophila</i>
body length (BL)	1.36-1.62	1.49-2.01
body breadth (BB)	0.84-0.98	1.02-1.19
antennal length	0.56-0.65	0.61-0.65
forewing-pad length (WL)	0.46-0.56	0.61-0.66
outer circumanal ring breadth (ARB)	0.26-0.31	0.23-0.25
caudal plate length	0.42-0.56	0.46-0.56
caudal plate breadth	0.61-0.81	0.69-0.73

Ratios

antennal length/forewing-pad length (AWL)	1.00-1.22	0.98-1.04
body breadth/body length (BBBL)	0.57-0.65	0.53-0.64
caudal plate breadth/caudal plate length (CPR)	1.30-1.45	1.29-1.56

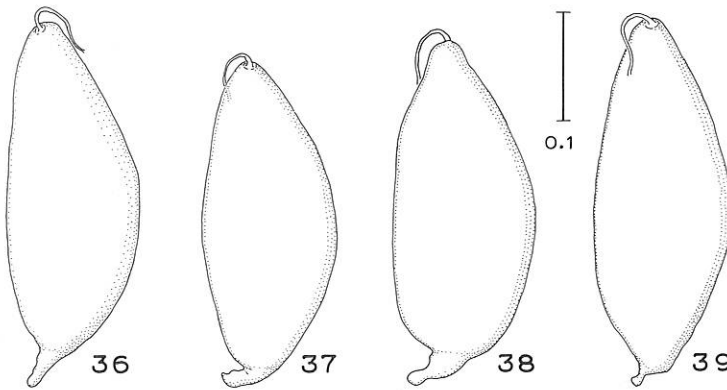
Affinities. The nymph of *A. spartiicola* is very like the nymph of *A. spartiophila*. In *spartiicola* the proximal part of the forewing-pad is more distant from the head. The chaetotaxy has some differences, as noted above: an evident character is number and position of the capitate setae of the abdomen margin and submargin, which in *spartiicola* are about half than in *spartiophila*: *spartiophila* has some capitate setae near the dorsal margin of the abdomen, which are lacking in *spartiicola*. Dimensions are, on the whole, shorter in *spartiicola*.

2.4. *Host plant and life history*

SULC (1907: 8) in the original description reports: «Nährpflanze: wahrscheinlich *Sarothamnus scoparius*». HAUPT (1935: 234) reports «VII, von mir aus *Sarothamnus* erbeutet bei Krefeld (Hülser Berg). Larven unbekannt». BURCKHARDT (1983: 55) records also *Cytisus scoparius*, without precisation if this datum is original or reported from Literature.

Our findings in Puglia are on *Cytisus decumbens* (Durante) Spach, a species that is present from Central France and Germany till South Italy and Albania, with strange lacunae.

As regards the life history of *A. spartiicola*, we found the species very abundant in May on the Gargano, with nymphs and newly hatched adults, on flowering *Cytisus decumbens*. Perhaps the species has one generation per year. So far, it is not possible to fix the stage of overwintering, probably egg.



Figs. 36-39: *Arytainilla spartiophila*, eggs, specimens from Lombardia, S. Maria Hoé.

The life history of the similar *A. spartiophila* was carefully studied by WATMOUGH 1968a and 1968b. This species has only one generation per year in Great Britain and overwinters as egg.

2.5. Distribution (fig. 40)

W. Germany, Nordrhein-Westfalen, Krefeld, Hülser Berg (HAUPT 1935: 234).

Switzerland, Bern, Laufental; Aargau, Herzberg, Staffelegg (BURCKHARDT 1983: 55).

France, Aude, Limoux, Rennes-les Bains (type locality), 1 male, 1 female, leg. ?, preserved in the Naturhistorisches Museum, Wien (SULC 1907: 8).

Italy, Puglia, Province Foggia, Commune Monte Sant'Angelo, Gargano, about at the 30th km of the road Vico-Monte Sant'Angelo, m 600, abundant the 13-14. V. 86; Puglia, Province Foggia, Commune Monte Sant'Angelo, near the town, along the road Monte Sant'Angelo-Vico, m 750, 26.V.82 (abundant) and 15.V.86; in total we collected more than 500 adults and 50 nymphs, always on *Cytisus decumbens*.

On the whole, *A. spartiicola* in Italy was found only in a restricted zone of the Puglia, on the Gargano promontory, between 600 and 750 m, where it is copious in May.

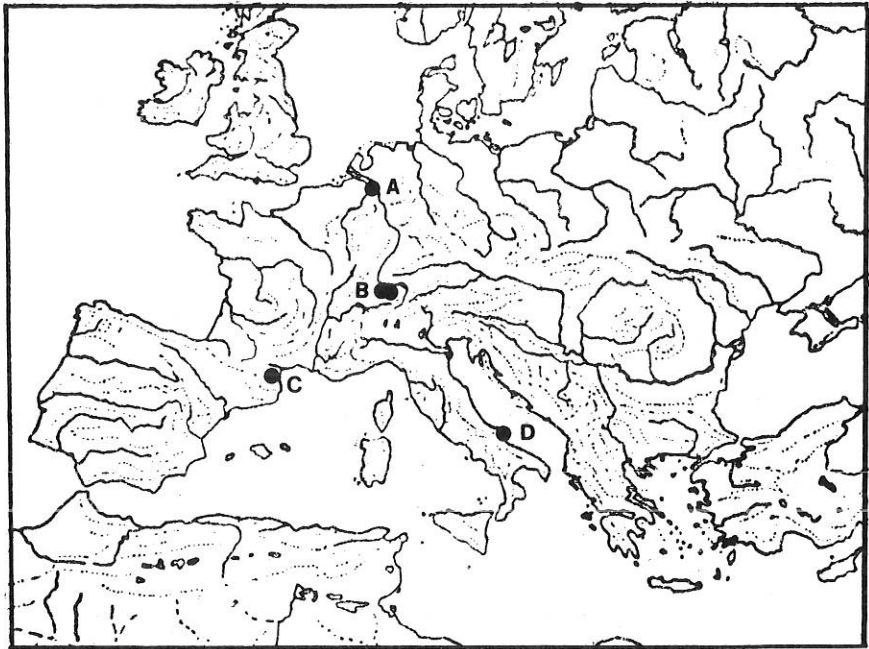


Fig. 40: *Aryanilla spartiicola*, distribution. - A) Germany, Krefeld; B) Switzerland, Bern and Aargau; C) France, Aude, Rennes-les-Bains (type locality); D) Italy, Puglia, Gargano.

The collected material (*Plesiotypi*) is preserved in the Natural History Museums of Genova, Milano, Trento and Verona, in the British Museum Nat. Hist. and in the Muséum Nat. Hist. Nat. Paris; also in the collections of D. Burckhardt (Genève), I. D. Hodkinson (Liverpool); P. Lauterer (Brno), F. Ossiannilsson (Uppsala), C. Rapisarda (Catania) and of the Authors.

2.6. Affinities

For *A. spartiophila* see figs. 5, 10, 12, 19, 21, 25, 27.

A. spartiicola is very similar to *A. spartiophila*; we report the following differential characters (some of these are less clear in some specimens): on the whole, smaller dimensions; shorter forewing, with reference to the width; narrower pterostigma, sometimes almost absent; forewing with shorter cell m_2 and with less acute proximal angle; thicker microsculpture; greater internal spine of metatarsus (in *spartiophila* very short); male proctiger with apical hairs directed backwards, longer; shorter parameres and with one point at the apex (in *spartiophila* the apex of the parameres have two points, visible only with rotation of the paramere); different penis; generally, shorter female genito-anal complex; apex of the female proctiger straight and less pointed (in *spartiophila* this apex is undulated, curved downwards and very pointed); apex of the complex valvulae-ovipositor with distinct parts (in *spartiophila* the parts at the apex are very approached in order to form a conical point; therefore the apex looks more pointed).

The character cited by HAUPT 1935, that the vein M is nearer to vein R_s , sometimes does not result clear in our specimens.

The differential characters of the egg and the nymph are cited in paragraph 2.3.

3. ACKNOWLEDGEMENTS

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REFERENCES

- BURCKHARDT D., 1983 - Beiträge zur Systematik und Faunistik der schweizerischen Psylloidea - *Entomologica basiliensis*, Basel, 8: 43-83, 42 figs.
CHICOTE C., 1880 - Adiciones à la Enumeración de los Hemipteros observados en España y Portugal - *Anales R. Soc. esp. Hist. nat.*, Madrid, 9: 185-203.
ENDERLEIN G., 1921 - Psyllidologica VI - *Zool. Anz.*, Leipzig, 52: 115-122, 2 figs.
ENDERLEIN G., 1926 - Psyllidologica VIII - *Ent. Mitt.*, Berlin-Dahlem, 5: 397-401.
FERRARI P. M., 1888 - Psillide raccolte in Liguria - *Annali Mus. civ. St. nat. Genova*, 26: 74-77.
HAUPT H., 1935 - Blattflöhe, Psyllina - In: Die Tierwelt Mitteleuropas, Leipzig, 4, X (1): 222-252, figs. 423-536.
HESLOP-HARRISON G., 1951 - The Arytainini of the Subfamily *Psyllinae*, Family *Psyllidae* - *Ann. Mag. nat. Hist.*, London, 12 (4): 417-462, 8 groups figs.
HESLOP-HARRISON G., 1961 - The Arytainini of the Subfamily *Psyllinae*, Family *Psyllidae*. II - *Ann. Mag. nat. Hist.*, London, 13 (3): 417-439.

- HODKINSON I. D. & WHITE I. M., 1979 - Homoptera Psylloidea - Handb. Ident. Br. Insects. R. ent. Soc. London, 2 (5a): 1-98, 321 figs.
- KLOET G. S. & HINCKS W. D., 1945 - A check list of the British insects - Stockport: 1-59 + 1-438.
- LAMBERTIE M., 1901 - Contribution à la faune des Hémiptères du Sud-Ouest de la France - *Actes Soc. Linn. Bordeaux*, 56: 129-230.
- LAMBERTIE M., 1910 - Idem, II éd. - *Miscellanea ent.*, Suppl., 18.
- LOGINOVA M., 1972 - On the fauna of Psylloidea from Morocco - *Comment. biol. Soc. Sci. fennica*, Helsinki, 47: 1-37, 121 figs.
- LOGINOVA M. M., 1976 - Psyllids of the Canary Islands and Madeira - *Comment. biol. Soc. Sci. fennica*, Helsinki, 81: 1-37, 169 figs.
- LOGINOVA M. M., 1977 - The classification of the Subfamily Arytaininae Crawf. II. A review of Genera of the Tribe Cyamophilini - *Ent. Obozr*, Leningrad, 56: 577-587, 25 figs. - *Idem*, English translation, 1978, *Ent. Rev.*, Washington, 56: 64-71, 25 figs.
- PUTON A., 1873 - Notes pour servir à l'étude des Hémiptères - *Annales Soc. ent. France*, Paris, Sér. V, 3: 11-26.
- PUTON A., 1875 - Catalogue des Hémiptères d'Europe, ecc., II Ed. - *Deyrolle*, Paris: 1-87.
- PUTON A., 1876 - Notes pour servir à l'étude des Hémiptères, 3^e partie - *Annales Soc. ent. France*, Paris, Sér. V, 6: 275-290.
- RAMÍREZ GÓMEZ C., 1956 - Los Psílidos de España (Continuación) - *Boletín R. Soc. esp. Hist. nat., Secc. biol.*, Madrid, 54: 63-106, figs. 7-12.
- ROUY G. & FOUCAUD J., 1897 - Flore de France, Paris, 4.
- SULC K., 1907 - Beiträge zur Kenntnis der Psylliden - *Bull. int. Acad. Sci. Bohême*, Prague, 12: 1-9, 2 pl.
- SULC K., 1910 - Príspevky ku poznání Psyll. II - *Rozpravy české Akad. Cis. Fr. Jos.*, Praha, 19 (2): 1-33, pl. 3-13.
- TUTIN T. G. & al. (ed.), 1968 - Flora Europaea - *Cambridge Univ. Press*, 4.
- WATMOUGH R. H., 1968a - Population studies on two species of Psyllidae on broom (*Sarothamnus scoparius* (L.)) (Wittmer) - *J. Anim. Ecol.*, 37: 283-314, 4 figs.
- WATMOUGH R. H., 1968b - Notes on the Biology of *Arytaina spartiophila* Förster and *A. genistae* Latreille on Broom (*Sarothamnus scoparius* (L.)) Wittmer) in Britain - *J. ent. Soc. sb Afr.*, Pretoria, 31: 115-122, 2 figs.
- WHITE I. M. & HODKINSON I. D., 1982 - Psylloidea (Nymphal stages) - Handb. Ident. Br. Insects. R. ent. Soc. London, 2, Part 5(b): 1-49, 174 figs.

RIASSUNTO - *Arytainilla spartiicola*, della Puglia, nuova per l'Italia (Homoptera Psylloidea).

Vengono descritti e confrontati con la nota *A. spartiophila*, adulto, uovo e ninfa al V stadio (questi due ultimi inediti) dell'*A. spartiicola* (Sulc, 1907), uno dei più rari Psilloidei europei. Gli AA raccolsero il taxon numeroso sul Gargano, su *Cytisus decumbens*, nuova pianta nutrice primaria. Il lavoro è corredato da 39 figure di dettagli e da una cartina geonemica.

ABSTRACT - *Adult, egg and fifth instar nymph (the two latter till now unknown) of A. spartiicola* (Sulc, 1907), one of the rarest European Psyllid, are described and compared with *A. spartiophila*. The AA collected many specimens of *A. spartiicola* on *Cytisus decumbens*, new host plant, on Gargano. Thirty-nine figures and a geographical map are also provided.

Indirizzi degli autori:

Conci Cesare, Museo Civico di Storia Naturale, Corso Venezia 55, 20121 Milano - Italia
 Livio Tamanini, Musei Civici, Via Calcinari 18, 38068 Rovereto (TN), Italia