

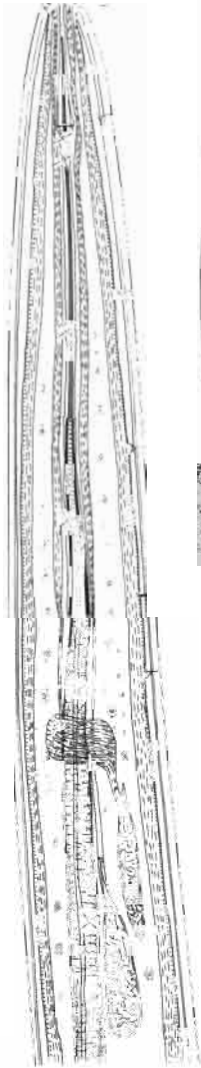


**Table 1.** *Morphometrics of Longidorus silvae* sp. n. (*paratypes*) (all measurements in  $\mu\text{m}$ , except L).

	Holotype	Females	J1	J2	J3	J4
n	1	11	13	12	16	11
L (mm)	7.5	6.9 $\pm$ 0.70 * (5.9-8.0) **	1.9 $\pm$ 0.18 (1.7-2.3)	2.6 $\pm$ 0.19 (2.3-2.9)	3.5 $\pm$ 0.39 (2.9-4.1)	4.9 $\pm$ 0.42 (4.1-5.4)
a	108.0	99.4 $\pm$ 10.34 (87.5-123.5)	69.3 $\pm$ 5.94 (61.2-79.5)	72.5 $\pm$ 5.21 (63.0-80.5)	82.0 $\pm$ 6.67 (72.5-94.5)	93.5 $\pm$ 8.04 (78.2-107.2)
b	11.4	12.7 $\pm$ 1.48 (11.0-16.3)	6.4 $\pm$ 1.1 (4.5-7.9)	7.3 $\pm$ 1.06 (6.2-9.7)	9.3 $\pm$ 1.63 (6.6-12.8)	10.5 $\pm$ 1.48 (8.4-12.9)
c	182.0	166.7 $\pm$ 20.27 (132.0-189.0)	31.4 $\pm$ 2.7 (27.6-36.5)	64.0 $\pm$ 5.0 (53.4-71.2)	80.0 $\pm$ 10.99 (63.0-96.5)	112.3 $\pm$ 10.18 (94.6-126.3)
c'	0.76	0.79 $\pm$ 0.04 (0.72-0.84)	2.95 $\pm$ 0.2 (2.5-3.3)	1.4 $\pm$ 0.13 (1.2-1.6)	1.2 $\pm$ 0.15 (1.0-1.5)	0.9 $\pm$ 0.1 (0.8-1.1)
V	46.3	48.6 $\pm$ 1.74 (44.9-50.7)	...	...	...	...
Lip reg. width	16.0	15.0 $\pm$ 0.89 (14.0-17.0)	7.5 $\pm$ 0.74 (6.5-9.0)	9.0 $\pm$ 1.01 (7.0-11.0)	10.0 $\pm$ 1.01 (8.0-11.5)	12.5 $\pm$ 0.85 (10.0-13.0)
Lip reg. height	5.5	5.0 $\pm$ 0.56 (4.5-6.5)	2.5 $\pm$ 0.39 (1.5-3.0)	3.0 $\pm$ 0.35 (2.5-3.5)	3.0 $\pm$ 0.42 (2.5-3.5)	3.5 $\pm$ 0.54 (3.0-4.5)
Odontostyle	128.0	122.5 $\pm$ 5.47 (113.5-133.0)	75.5 $\pm$ 2.05 (70.5-78.0)	80.5 $\pm$ 3.13 (72.5-83.0)	94.0 $\pm$ 7.77 (83.0-104.5)	111.5 $\pm$ 3.21 (107.0-117.5)
Odontophore	57.5	54.5 $\pm$ 6.61 (44.5-70.0)	30.5 $\pm$ 3.35 (26.0-36.0)	40.5 $\pm$ 3.26 (32.0-44.5)	45.0 $\pm$ 5.32 (30.0-51.5)	51.5 $\pm$ 4.04 (47.0-57.5)
Tot. stylet	186.0	177.0 $\pm$ 10.28 (164.5-198.0)	106.0 $\pm$ 3.55 (101.0-113.0)	121.0 $\pm$ 4.52 (112.5-127.5)	139.0 $\pm$ 11.14 (114.0-156.5)	163.0 $\pm$ 5.66 (155.5-173.5)
Repl. odontostyle	...	...	82.0 $\pm$ 2.0 (78.0-85.5)	98.0 $\pm$ 4.73 (83.0-104.5)	107.5 $\pm$ 6.5 (94.5-117.5)	124.5 $\pm$ 3.86 (119.0-131.5)
Guide ring	36.0	40.0 $\pm$ 2.25 (37.0-44.0)	26.0 $\pm$ 1.1 (24.5-27.5)	27.0 $\pm$ 3.38 (17.5-29.5)	31.5 $\pm$ 2.29 (27.0-35.5)	36.5 $\pm$ 1.55 (34.0-39.5)
Phar. bulb length	167.0	152.5 $\pm$ 11.28 (135.5-169.0)	87.0 $\pm$ 3.8 (81.0-94.5)	102.0 $\pm$ 9.55 (79.5-115.5)	115.0 $\pm$ 12.42 (91.5-134.0)	135.0 $\pm$ 6.08 (126.5-144.0)
Phar. bulb width	26.5	24.0 $\pm$ 3.69 (17.5-32.5)	14.5 $\pm$ 0.71 (13.5-16.0)	17.0 $\pm$ 0.71 (16.0-18.0)	19.5 $\pm$ 1.82 (14.5-21.5)	22.5 $\pm$ 0.61 (21.0-23.0)
Ant. gen. branch	576.5	668.5 $\pm$ 80.5 (547.0-859.0)	...	...	...	...
Post. gen. branch	529.5	632.0 $\pm$ 122.5 (500.0-941.0)	...	...	...	...
Ant. gen. branch %	7.7	9.8 $\pm$ 1.4 (7.6-13.0)	...	...	...	...
Post gen. branch %	7.0	9.3 $\pm$ 2.0 (7.2-14.2)	...	...	...	...
Body diam. mid-body	69.5	69.0 $\pm$ 4.1 (63.0-77.0)	28.0 $\pm$ 2.5 (23.0-33.0)	36.0 $\pm$ 2.76 (32.5-41.5)	43.5 $\pm$ 3.31 (37.0-49.5)	52.5 $\pm$ 3.43 (47.5-59.5)
Body diam. anus level	54.0	52.5 $\pm$ 2.34 (49.0-57.0)	21.0 $\pm$ 1.28 (19.0-23.5)	29.5 $\pm$ 2.14 (27.0-34.0)	36.5 $\pm$ 3.53 (29.5-40.5)	45.5 $\pm$ 2.70 (41.5-49.5)
Rectum	43.0	40.0 $\pm$ 2.96 (36.5-44.5)	16.0 $\pm$ 2.07 (13.0-21.0)	19.5 $\pm$ 2.28 (14.5-22.5)	23.5 $\pm$ 2.35 (19.5-26.5)	30.5 $\pm$ 1.64 (28.0-33.0)
Tail	41.0	41.5 $\pm$ 2.7 (37.0-44.5)	61.5 $\pm$ 3.51 (57.0-66.5)	40.5 $\pm$ 3.08 (35.5-46.0)	45.0 $\pm$ 4.55 (38.0-52.5)	44.0 $\pm$ 2.5 (40.5-48.0)
Hyaline tail tip	13.5	14.0 $\pm$ 1.09 (12.5-16.0)	6.5 $\pm$ 1.14 (4.5-8.5)	7.5 $\pm$ 0.95 (6.0-9.0)	9.5 $\pm$ 1.67 (6.0-11.5)	10.5 $\pm$ 1.3 (9.5-13.5)
Mucro	...	...	22.5 $\pm$ 2.43 (20.0-27.0)	...	...	...
Prerectum	588.0	522.0 $\pm$ 109.1 (388.0-729.5)	263.2 $\pm$ 31.05 (206.0-306.0)	311.5 $\pm$ 69.26 (176.5-400.0)	308.0 $\pm$ 47.49 (217.5-400.0)	421.5 $\pm$ 80.97 (306.0-576.5)

\* Mean and standard deviation.

\*\* Range.



*Male* : not found.

*Juveniles* : Morphologically similar to adult but smaller; tail of first stage elongate-conoid with a long mucro, and bearing two caudal pores on each side.

#### TYPE HOST AND LOCALITY

Natural habitat, woodland, at Ampezzo, province of Udine, Italy. Other population at Palazzeto, province of Siena, Tuscany, Italy.

#### TYPE SPECIMENS

Holotype, eight paratype females and juveniles in the Collection of the Istituto di Nematologia Agraria del Consiglio Nazionale delle Ricerche, Bari, Italy; one paratype female in the following collections : Muséum National d'Histoire Naturelle, Laboratoire de Biologie Parasitaire, Protistologie, Helminthologie, Paris, France; Entomology and Nematology Department, Rothamsted Experimental Station, Harpenden, Herts, England; Plant Nematology Laboratory Collection, United States Department of Agriculture, Beltsville, Maryland, USA.

#### DIAGNOSIS AND RELATIONSHIPS

*L. silvae* sp. n. is characterized by the lip region continuous with the rest of the body, unevenly bilobed amphidial pouches, the female tail short and rounded to almost hemispherical and the first larval stage with a long tail mucro.

The new species is similar to *L. goodeyi* Hooper, 1961, *L. major* Roca & D'Errico, 1987 and *L. picenus* Roca, Lamberti & Agostinelli, 1985, in having lip region continuous with the rest of the body and tail of the first stage with a mucro. It differs from *L. goodeyi* in having slender body ("a" value 87.5-123.5 vs 67-117), anteriorly situated vulva (V = 44.9-50.7% vs 50-55%), longer odontostyle (113.5-133.0 vs 96-109 µm) and slightly shorter odontophore (44.5-70.0 vs 42-79 µm); from *L. major* in having shorter and slender body (L = 5.9-8.0 vs 8.5-12 mm and "a" value 87.5-123.5 vs 80.2-94.6), anteriorly situated vulva (V = 44.9-50% vs 49.4-54%), higher "c'" value (0.72-0.84 vs 0.5-0.7), slightly shorter odontostyle (113.5-133.0 vs 125.3-137.3 µm) and shorter tail (37-44.5 vs 42.6-60 µm) with longer mucro (20-27 vs 12-14.6 µm); from *L. picenus* in having slender body ("a" value 87.5-123.5 vs 80-90), shorter

odontostyle and odontophore (113.5-133.0 vs 131-146 µm and 44.5-70 vs 75-85 µm, respectively), anteriorly situated vulva (V = 44.9-50.7% vs 51-55%), higher "c'" value (0.72-0.84 vs 0.5-0.7) and absence of the male.

Similarities are also observed with *L. fasciatus* Roca & Lamberti, 1981, *L. iuglandis* Roca, Lamberti & Agostinelli, 1985 and *L. moesicus* Lamberti, Choleva & Agostinelli, 1983. *L. silvae* sp. n. differs from *L. fasciatus* in having more robust body ("a" value 87.5-123.5 vs 121-143), lower "c'" ratio (133-189 vs 187-283), longer odontostyle (113.5-133 vs 102-119 µm) and longer distance of guide ring from the anterior end (37-44 vs 33-39 µm), and the tail of first stage with a long mucro, though juveniles are not reported in the original description (Roca & Lamberti, 1981); from *L. iuglandis* in having slender body ("a" value 87.5-123.5 vs 73-96), lower "c'" ratio (132-189 vs 154-222), anteriorly situated vulva (V = 44.9-50.7 vs 51-57), shorter odontophore (44.5-70 vs 71-80 µm), the tail of first stage with a long mucro and absence of the males; and from *L. moesicus* in having anteriorly situated vulva (V = 44.9 vs 50-54), lower "c'" value (0.72-0.84 vs 0.8-1.2), longer odontophore (44.5-70.5 vs 59-66 µm), longer distance of oral opening to guide ring (37-44 vs 32-38 µm), the tail of first stage with a long mucro, though juveniles are not reported in the original description (Lamberti *et al.*, 1983), and absence of the males.

#### References

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