

NEW RECORD OF *NAGELUS LEPTUS* (ALLEN, 1955) SIDDIQI, 1979 FROM INDIA AND SYNONYMY OF *N. SAIFULMULUKENSIS* MAQBOOL ET SHAHINA, 1987 WITH *N. LEPTUS*

by
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Summary. *Nagelus leptus* (Allen) Siddiqi is reported from India. Measurements of populations from various origins are compared. *N. saifulmulukensis* Maqbool et Shahina is considered a junior synonym of *N. leptus*.

During May, 1988 samples were collected from the rhizosphere of unidentified plants in a pine forest on the hill slopes at Gulmarg, Kashmir, India. Among several tylenchids recovered from these samples were females of the genus *Nagelus* Thorne et Malek, 1968. Detailed morphological and comparative studies showed that these specimens resembled *N. saifulmulukensis* Maqbool et Shahina, 1987 and *N. leptus* (Allen, 1955) Siddiqi, 1979. Paratypes (4 females and 1 juvenile) of *N. saifulmulukensis* were ob-

tained from USDA Nematode Collection, Beltsville, Maryland, USA, through courtesy of Dr. A.M. Golden, for comparison with this species. Various body measurements of *N. saifulmulukensis* in the original description by Maqbool and Shahina (1987) and those obtained by me are given in Table I.

Remarks: The specimens from India are identified as *Nagelus leptus* (Allen, 1955) Siddiqi, 1979 based on mor-

TABLE I - Biometrical characters of females of *Nagelus leptus* from different geographical regions (all measurements in μm).

Species	N	L	b	V	Stylet	Tail L	Tail annuli	Hyaline tail region			
<i>N. leptus</i> from Gulmarg, India (Authors measurements)	20	785-937 (887)	28-34 (32.1)	5.2-6.2 (5.5)	11.5-14 (12.1)	3.5-4.6 (4.1)	52-55 (53.4)	25-27 (26.2)	67-80 (73)		
<i>N. leptus</i> original description (After Allen, 1955)	14	640-960	26-34	4.5-5.7	11-12	3.4-4.2	51-56	23-27			
Farmington Flats, Utah (After Powers et al., 1983)	38	730-980 (850)	27-37 (32)	4.5-5.7 (5.2)	10.4-13.8 (12.2)	3.8-5.2 (4.3)	52-57 (54)	25-29.5 (27)	55-88 (67)	9.5-15 (11)	
Spitzbergen Island (After Loof, 1971)	30	640-910 (790)	25-41 (28)	5-6.2 (5.5)	10.4-12.8 (11.6)	3.2-3.9 (3.5)	51-58 (54)	24-28 (26)	-	-	
Sweden (After Rossen and Loof, 1962)	12	840-1030	32-37	5.4-6.2	11.2-13.6	4.5	51-55	25-28			
<i>N. aberrans</i> (syn. of <i>N. leptus</i>) (After Thorne and Malek, 1968)		760-820 (785)	23-25 (23.5)	5.2-5.9 (5.5)	10-13 (11.7)	2.8-3.9 (3.5)	52-54 (53)	24-28.5 (26)	64-80 (71)	11-13 (12.5)	
<i>N. abalosi</i> (syn. of <i>N. leptus</i>) (After Doucet, 1980)	10	830-930 (880)	28-31 (29)	5.3-5.7 (5.5)	12-14 (13)	3.2-3.9 (3.6)	53-56 (54.4)	28 (28)	64-77 (69.5)	64-84 (74)	
<i>N. virginalis</i> (syn. of <i>N. leptus</i>) (After Doucet, 1978)	15	880-1000 (970)	30-38 (33)	5-5.8 (5.5)	13.2-15.1 (14.3)	3.4-4.2 (3)	52-56 (54)	27-29 (28)	61.5-74 (68.4)	59-68 (64)	
<i>N. saifulmulukensis</i> (syn. of <i>N. leptus</i>) (After Maqbool and Shahina, 1987)	21	780-1030 (890)	30-37 (32)	4.7-6.5 (5.6)	10.3-12.8 (11)	4.4-6.6 (4.8)	51-55 (52)	25.5-27 (26.5)	80-86	100-110	13-18 (16)
<i>N. saifulmulukensis</i> (Authors measurements of paratypes)	4	710-826 (783)	29-32 (31)	4.8-5.3 (5)	11.5-11.9 (11.6)	3.6-3.8 (3.7)	54-58 (55.5)	25-27 (26)	61-72 (68)	70-78 (72)	9-12 (11)

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phological and morphometric data (see Table I). Maqbool and Shahina (1987) differentiated *Nagelus saifulmulukensis* from the closely related *N. leptus* in having smaller number of lip annuli, greater c' value and over 100 tail annuli number, this being approximately double the number found in the latter. In the description of *N. saifulmulukensis*, Maqbool and Shahina recorded tail annuli as 100-110 whereas in the tail illustrations they showed 112-117 tail annuli. However, a re-study of paratype females of *N. saifulmulukensis* showed 7-8 lip annuli, 3.6-3.8 c' value, and a tail 61-72 μm long with 70-78 annuli, i.e. well within the range of *N. leptus*. Hence, *N. saifulmulukensis* Maqbool et Shahina, 1987 is here synonymised with *N. leptus* (Allen,

1955) Siddiqi, 1979. It was also observed that the phasmids are located anterior to the middle of the tail in almost all populations of *N. leptus*. The various body measurements of *N. leptus* specimens occurring in Pakistan and India are similar to those of Farmington Flats, Utah, USA. In conclusion, *N. leptus* is a widely distributed species usually associated with grasses and herbaceous plants at high altitudes from 6000 to 12,000 feet.

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