The genus *Neolobocriconema* proposed by Mehta and Raski, 1971 was confirmed as valid by Loof and De Grisse, 1973, Khan et al., 1976, Andrassy, 1979 and Hashim, 1984. It includes seven valid species.

In November 1986, during a plant parasitic nematode survey in Brazil, a large population of a *Neolobocriconema* species was extracted from the rhizosphere of mango (*Mangifera indica* L.) at Campo Grande in the State of Rio de Janeiro. Morphological studies on several specimens showed that the population was conspecific with *N. cataracticum* which was collected and described by Andrassy (1979) from the rain forest in the Iguacu National Park, Brazil. The original description is based on a restricted number of specimens. The present study amplifies and extends the known range of morphometric variability. Specimens have been distributed to several plant-parasitic nematode collections.

The specimens were extracted by the decanting and sieving method. They were killed and fixed in hot aqueous solution of 4% formaldehyde, dehydrated slowly in an ethanol saturated chamber, mounted in dehydrated glycerin and measured and photographed under a light microscope. After fixation several specimens were transferred to Os O₄ solution for 12 h, infiltrated with Spurr’s resin, coated with gold and examined with a SEM at 10 kV accelerating voltage (De Grisse, 1973).

*Description and illustration* (Table I; Figs. 1, 2)

Small c-shaped body with 39-45 annuli. Annuli 10-13 μm thick, 53-70 μm wide at mid-body. They are ornamented by fine longitudinal incisures
Fig. 1 - Light microscope photomicrographs of *Neolobocriconema cataracticum*. a) Entire female; b) Excretory pore (arrowed) in ventral view; c) Anterior body portion showing the excretory pore (arrowed) position, the shape of stylet knobs and the long ovary, overlapping the stylet; d) Anchor shaped stylet knobs; e, f) Posterior body portion: note the posteriorly positioned vulva (arrowed); g) Vulval area in ventral view; h) Terminal body portion showing anastomosed annuli.
(Scale bar = 20 μm).
Fig. 2 - SEM photomicrographs of *Neolobocriconea cataracticum*. a, b, c). Different views of head region; c) Cuticular ornamentation of body annuli at mid-body; e, f) Terminal body portion showing cuticular lobes. (Scale bar = 10 μm)
Table I - Morphometrical characteristics of Neolobocriconema cataracticum.

<table>
<thead>
<tr>
<th>Character</th>
<th>Range</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body length in µm</td>
<td>366 - 514</td>
<td>446</td>
<td>29.4</td>
</tr>
<tr>
<td>Body width in µm</td>
<td>51 - 70</td>
<td>63</td>
<td>5.1</td>
</tr>
<tr>
<td>Stylet length in µm</td>
<td>85 - 107</td>
<td>98</td>
<td>5.5</td>
</tr>
<tr>
<td>Stylet length as % of body length</td>
<td>19 - 25</td>
<td>22</td>
<td>1.6</td>
</tr>
<tr>
<td>Stylet length as % of oesophagus</td>
<td>66 - 75</td>
<td>71</td>
<td>2.4</td>
</tr>
<tr>
<td>Stylet knobs width in µm</td>
<td>11 - 13</td>
<td>12</td>
<td>0.7</td>
</tr>
<tr>
<td>Disc-like head width in µm</td>
<td>19 - 22</td>
<td>21</td>
<td>0.8</td>
</tr>
<tr>
<td>Annuli thickness at mid-body in µm</td>
<td>10 - 13</td>
<td>11</td>
<td>0.9</td>
</tr>
<tr>
<td>Excretory pore head end in µm</td>
<td>130 - 163</td>
<td>150</td>
<td>5.9</td>
</tr>
<tr>
<td>Ex. pore from ant. end as % of body length</td>
<td>30 - 38</td>
<td>33</td>
<td>1.7</td>
</tr>
<tr>
<td>Oesophagus total length in µm</td>
<td>120 - 148</td>
<td>137</td>
<td>6.0</td>
</tr>
<tr>
<td>V%</td>
<td>94 - 96</td>
<td>95</td>
<td>0.4</td>
</tr>
<tr>
<td>Ratios:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a</td>
<td>6.2 - 8.6</td>
<td>7.1</td>
<td>0.6</td>
</tr>
<tr>
<td>b</td>
<td>2.5 - 3.5</td>
<td>3.2</td>
<td>0.2</td>
</tr>
<tr>
<td>c</td>
<td>33 - 45</td>
<td>39</td>
<td>2.6</td>
</tr>
<tr>
<td>Vulva-terminus distance in µm</td>
<td>18 - 24</td>
<td>21</td>
<td>1.7</td>
</tr>
<tr>
<td>R</td>
<td>39 - 45</td>
<td>42</td>
<td>1.3</td>
</tr>
<tr>
<td>Rst</td>
<td>10 - 12</td>
<td>11</td>
<td>0.6</td>
</tr>
<tr>
<td>Roes</td>
<td>13 - 16</td>
<td>14</td>
<td>0.7</td>
</tr>
<tr>
<td>Rex</td>
<td>15 - 17</td>
<td>16</td>
<td>0.5</td>
</tr>
</tbody>
</table>

and numerous spine-like irregular lobes. First 5-8 annuli are without appendages. At the posterior body portion the finger spine-like cuticular lobes are usually long, twice their width.

Anastomoses very rare involving 2-3 annuli and usually confined at the posterior body portion. Anterior end disc-shaped, well separated from the remainder of the body by a distinct neck-like structure (De Grisse and Maas, 1970) with a distinct basal collar. Diameter of the disc (lateral view) 19-22 µm. SEM end-on view shows that the disc is the second body annulus and has two deep indentations (dorsal and ventral) and two shallow lateral ones. Inside the disc is the first annulus with four distinct sub-median lobes and squarer labial disc bearing the centrally located I-like oral opening and the slit-like amphidial apertures. Behind the «neck» all annuli are retrorse. Oesophagus typical for the genus. Excretory pore on the 15th-16th annulus always posterior to the base of the oesophagus. Vula closed on
the 3rd annulus from terminus with smooth vulval lips. Genital tube
typical of the genus very long usually overlapping half of the stylet length
with empty spermatheca. Anus between the last two annuli. Post-vulval
body portion 18-24 \( \mu \text{m} \) long.

\textit{Deposition of specimens}

27 females at Istituto Nematologia Agraria, C.N.R., Bari, Italy and 3
each at: USDA, Nematode collection, Beltsville, Maryland, USA; Nem. Dept.
Rothamsted Exp. Station, Harpenden, England; Plantenziektenkundige
Dienst, Wageningen, The Netherlands; Canadian National Collection of
Nematodes, Ottawa, Canada; National Nematode Collection, Indian Agric.
Res. Institute, New Delhi, India; Museum National d'Histoire naturelle,
Lab. des Vers, Paris, France; Division of Nematology, University of
California, Davis, California, USA; German Nematode Collection, Institut
für Nematologie, Münster, W. Germany.

\textit{Discussion}

The genus \textit{Neolobocriconema} was erected by Mehta and Raski, 1971
to contain the type species of the genus \textit{N. laterale} (Khan \textit{et} Siddiqi, 1963)
Mehta \textit{et} Raski, 1971 and \textit{N. serratum} (Khan \textit{et} Siddiqi, 1963) Mehta \textit{et}
Raski, 1971. Additional species were described later or transferred to
\textit{Neolobocriconema}. To date, in the nematology literature, there are 3 keys
available (Andrassy, 1979; Ebsary, 1981; Hashim, 1984) to species of
\textit{Neolobocriconema} that distinguish the 7 nominal species of the genus: \textit{N.}
braziliense (Raski \textit{et} Pinochet, 1975) Hashim, 1984; \textit{N. insulicum} Choi \textit{et}
Geraert, 1975; \textit{N. serratum} (Khan \textit{et} Siddiqi, 1963) Mehta \textit{et} Raski, 1971;
\textit{N. laterale} (Khan \textit{et} Siddiqi, 1963) Mehta \textit{et} Raski, 1971; \textit{N. cataracticum}
Andrassy, 1979; \textit{N. olearum} Hashim, 1984 and \textit{N. aberans} (Jairajpuri \textit{et}

Most of the morphometrical characters of our population of \textit{N.}
cataracticum agree well with those given by Andrassy, 1979 in the original
description although the body length of our specimens tends to be longer
(53\% of the specimens over 0.45 mm). \textit{N. cataracticum} can easily be
distinguished from all the other species by its distinct quadrilobate
(Discocriconemella-like) head, the presence of submedian lobes, the
characteristic ornamentation of the body annuli, the long stylet and the
posterior \((R = 3)\) position of the vulva. The species has also been recently
reported from the State of Minas Gerais, Brazil (Campos, 1987).
SUMMARY

The original description of *Neolobocriconema cataracticum* Andrassy is amplified and supplemented with observations by light microscope and scanning electron microscope. Particular consideration was given to amplifying details of the peculiar head and cuticular structures. The morphometrical descriptive characteristics of a population of *N. cataracticum* from the State of Rio de Janeiro extend the known range of variability for this species.

LITERATURE CITED


KHAN E., CHAWLA M.C. and SAHA M., 1976 - Criconematoidea (Nematoda: Tylenchida) from India, with descriptions of nine new species, two new genera and a family. *Indian J. Nematol.,* 5: 70-100.


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