The present work represents a taxonomic study of the suborder Diplogastrina of the order Rhabditida. Samples rich in organic debris were collected from different parts of the country, especially from the northern region. The samples were collected in different seasons from different types of ecosystems like, lakes, hills, mountains, rivers, canals, ditches, ponds, tree-holes, forests, cultivated soil etc. so as to collect all the nematodes prevalent in different seasons and in different ecosystems. The samples were processed by Cobb’s sieving and decantation and modified Baermann’s funnel techniques.

In all, twenty one species belonging to thirteen genera distributed under five subfamilies and three families of the superfamily Diplogastroidea have been studied in detail. Of these, fourteen species which are new to science have been described and illustrated and five already known species have also been described. In addition, description of one new genus, one known and one new species has been published. Eleven of the total of thirteen genera recorded 5 known species are being reported for the first time from India. The terminology used in the text to describe the parts of the stoma is of De Ley et al. (1995) and of other structural details of Fürst von Lieven and Sudhaus (2000).

Order: Rhabditida
Suborder: Diplogastrina
Superfamily: Diplogastroidea
Families: 1. Diplogasteroididae
2. Diplogastridae
3. Neodiplogastridae

**Subfamilies:**
1. Diplogasteroidinae
2. Demaniellinae
3. Diplogastrinae
4. Neodiplogastrinae
5. Glauxinematinae

**Genera**

1. *Goffartia*
3. *Fuchsnema*
5. *Butlerius*
7. *Demaniella*
9. *Oigolaimella*
11. *Koerneria*
13. *Glauxinema*

2. *Rhabditoides*
4. *Acrostichus*
6. *Diplogastrellus*
8. *Paroigolaimella*
10. *Fictor*
12. *Mononchoides*

**Species**

1. *Goffartia minuta* sp. n.
3. *Fuchsnema uricus* sp. n.
5. *Butlerius micans*
7. *Diplogastrellus phoudelicus* sp. n.

2. *Rhabditoides papillatum* sp. n.
4. *Acrostichus nudicapitatus*
6. *Diplogastrellus latigubernacula* sp. n.
8. *Diplogastrellus kashmirensis* sp. n.
9. *Demaniella keiraki* sp. n.
10. *Paroigolaimella poonchiella* sp. n.
11. *Fictor dodhpurensis* sp. n.
12. *Fictor manipurensis* sp. n.
13. *Fictor* sp.
14. *Koerneria lucani*
15. *Koerneria longispicula* sp. n.
16. *Koerneria minirobstus* sp. n.
17. *Koerneria filicaudata*
18. *Mononchoides striatus*
19. *Mononchoides indicus*
20. *Oigolaimella longicauda*
21. *Glauxinema megaonchus* sp. n.

**Published genus**: 1. *Peterngus*

**Published species**: 1. *Peterngus nepenthi*
   2. *Diplogastrellus heynsi*
   3. *Diplogastrellus thoubalicus*

**Genera reported for the first time from India**

1. *Goffartia*  2. *Rhabditoides*
3. *Fuchsnema*  4. *Acrostichus*
5. *Butleriuss*  6. *Demaniella*
7. *Paroigolaimella*  8. *Oigolaimella*
11. *Glauxinema*
Characteristic features of the species studied

1. *Goffartia minuta* sp. n.

*Goffartia minuta* sp. n. is characterized by having a small-sized body, barrel-shaped stoma, muscular procorpus which is shorter than post-corpus, amphidelphic female reproductive system, arcuate, slender spicules, gubernaculum having a distal sleeve and eight pairs of genital papillae.

2. *Rhabditoides papillatum* sp. n

*Rhabditoides papillatum* sp. n. is characterized by three pairs of post-deirids in the lateral fields in addition to deirids, posteriorly curved tubular stoma, amphidelphic female reproductive system, strongly developed, arcuate spicules with bilobed capitulum, a slender gubernaculum with a sleeve and anteriorly directed bifid proximal ends and nine pairs of genital papillae.

3. *Fuchsnema uricus* sp. n.

*Fuchsnema uricus* sp. n. is characterised by a medium-sized body, monoprodelphic reproductive system without a post-uterine sac, anteriorly directed muscular vagina and far posteriorly located vulva; long, slender, arcuate spicules; gubernaculum with proximal thread-like flexible part and ten pairs of genital papillae; 4 precloacal, 6 postcloacal.
4. *Acrostichus nudicapitatus*

The description and morphometric measurements of *A. nudicapitatus* of our sample concur well with that of Steiner (1914). However, a slight variation was found in the built of spicules (heavily built with blunt distal tip vs moderately built with pointed distal tip).

5. *Butlerius micans*

The descriptions and morphometric measurements of our specimens concur well with that of Pillai & Taylor (1968) in general morphometries, presence of zipper-like structure in the lumen of procorpus, amphidelphic female reproductive system, general shape of spicules and number of caudal papillae. However, slight variations were observed in the position of amphidial openings (at level of cheilostom vs anterior to level of teeth), visibility of excretory pore (clearly opening to exterior vs inconspicuous), shape of gubernaculum (with a distal sleeve vs without a distal sleeve), and in male tail (with a bursal fold vs without a bursal fold).

6. *Diplogastrellus latigubernacula*

*Diplogastrellus latigubernacula* sp. n. is characterized by small body, amphidial apertures at level of gymnostom, proximally curved spicules and a broad gubernaculum with a cleft on posterior aspect.
7. *Diplogastrellus kashmirensis* sp. n.

*Diplogastrellus kashmirensis* sp. n. is characterized by a slender body, far posteriorly located amphidial openings, post uterine sac with remnants of gonad, arcuate spicules, globular gubernaculum with sleeve and v4 far posterior to cloaca.

8. *Diplogastrellus phoudelicus* sp. n.

*Diplogastrellus phoudelicus* sp. n. is characterized by a small body, tubular stoma, claw-like dorsal tooth, presence of post-uterine sac; gubernaculum with a large sleeve and nine pairs of caudal papillae in males.

9. *Demaniella keiraki* sp. n.

*Demaniella keiraki* sp. n. is characterized by a medium-sized body, long, tubular stoma, elongate median bulb, amphidelphic female reproductive system, oviduct opening at base of spermatheca, a bilobed uterus, arcuate spicules, gubernaculum with a distal spout-like process and sleeve, and seven pairs of genital papillae.

10. *Paroigolaimella poonchiella* sp. n.

*Paroigolaimella poonchiella* sp. n. is characterized by far posteriorly located amphidial apertures, stoma with two rows of warts, a pouch-like bladder present opposite vulva, complex heavily built spicules with angular dorsal arms and blunt processes on ventral side and nine pairs of caudal papillae.
11. *Fictor dodhpurensis* sp. n.

*Fictor dodhpurensis* sp. n. is characterized by a small body, presence of numerous denticles on the gymnostomal walls, left subventral wall of stegostom provided with serrated margins, slender arcuate spicules, broad, wedge-shaped gubemaculum with blunt distal tip.

12. *Fictor manipurensis* sp. n.

*Fictor manipurensis* sp. n. is characterised by a medium sized body, apically bifurcated cheilorhabdial filaments, the presence of several warts on the gymnostomal walls, left subventral stegostomal wall with serrated margin divisible into two plates, strong valve plates, presence of cuticular infolding anterior to cloaca, long arcuate, setose spicules, a slender gubemaculum with a distal sleeve, relatively large phasmidial apertures and eight pairs of genital papillae.

13. *Fictor* sp.

The morphometric measurements and description of our specimens concur well with that of *Fictor rarus* given by (Völk, 1950) Goodey, 1963. However, in our sample males could not be found and hence, several characters of taxonomic importance present in males could not be studied. It is, therefore, not possible to assign a specific taxon to this population. Hence this species is reported as *Fictor* sp. in the present study.
14. **Koerneria lucani**

Measurements and descriptions of our specimens agree well with that of *Koerneria lucani* (Körner, 1954) Meyl, 1961. However, slight differences were observed in the value of c (5.1-6.9 vs 7.1-8.4) and in the value of V (48.9-52.2 vs 53-56).

15. **Koerneria longispicula** sp. n.

*Koerneria longispicula* sp. n. is characterized by a small body, small stoma, nerve ring in the anterior half of isthmus, slender arcuate relatively long spicules and gubernaculum with sleeve.

16. **Koerneria minirobustus** sp. n.

*Koerneria minirobustus* sp. n. is characterized by a small body, very small stoma, large median and basal bulbs, short and almost straight spicules, proximally bifurcated gubernaculum and eight pairs of caudal papillae.

17. **Koerneria filicaudata**

The measurements and descriptions of our specimens agree well with that given by Khera, 1970. However, a slight difference was found in the length of stoma (10.5-11.5 μm vs 7.5-8.5 μm). The description of male is being reported for the first time.
18. Mononchoides striatus

The description and measurements of our specimens agree well with *M. striatus* (Bütschli, 1876) Goodey, 1963. However, slight differences were found in the length of tubular part of stegostom (longer than wide vs as long as wide) and length of gubernaculum (14-22 μm vs 24-26 μm).

19. Mononchoides indicus sp. n.

*Mononchoides indicus* sp. n. is characterized by a medium sized body, prominent longitudinal ridges on cuticle, large ellipsoidal amphidial apertures, large glandular part of uterus, spermatheca continuous with uterus and gubernaculum with a proximal filamentous appendage and a sleeve distally.

20. Oigolaimella longicauda

The description and measurements of our specimens agree well with *O. longicauda* (Claus, 1862) apud Fürst von Lieven (2003) in the morphometric values and in the shape of spicules and gubernaculum. However, slight differences were found in the length of stoma (12.5-13.5 μm vs 6-8 μm) and position of phasmids (17-24 μm from anus vs 29-48 μm from anus).

21. Glauxinema megaonchus sp. n.

*Glauxinema megaonchus* sp. n. is characterized by a large dorsal tooth, long stoma, absence of tooth, teeth or denticles on the subventral walls, continuous spermatheca and uterus, stout spicules and gubernaculum with distal sleeve.