MATERIAL AND METHODS

The material for the present work was collected from ecologically different types of lentic freshwater bodies such as small, turbid ephemeral pools, large permanent ponds, open wells, and reservoirs, and lotic systems like rivers and canals.

Ordinary hand-towed plankton net with diameter of 25 cm (mesh size of 75 µm) was used for collecting samples from the surface and subsurface waters. A large tow-net with diameter of 50 cm (mesh size of 75 µm) was used for collecting samples from deep wells, rivers and large lakes and reservoirs. After sufficient quantity of plankton was collected in the net, the plankton concentrate was transferred into specimen tubes and preserved in 10% formalin solution. Digital images of the principal habitats sampled were taken with Canon digital camera.

Specimens were dissected under Stereozoom trinocular microscope (Getner) (at a magnification of 10 X) in the medium of glycerol. Permanent preparations were mounted in glycerol, sealed with paraffin and Araldite. For all appendages, a single specimen was used. However, if any dissected appendage or body part got damaged while dissecting or mounting, two or three specimens were used to study them in detail. All body measurements are given in mm. Diagrams of habitus and various appendages were drawn with the aid of Carl Zeiss Axioskop 2 plus DIC microscope. Digital images of P5, habitus, variation showing appendages were taken with Canon Digital camera fitted to DIC microscope. Total length refers to the body length of individuals excluding caudal setae.

The voucher specimens of the known species of Diaptomidae collected during present study were deposited in the National Zoological Collections of Zoological Survey of India (ZSI), Kolkatta, India. Their registration numbers are as in Table 1.
The abbreviations used in the tables concerning the Material Examined are as follows:
AP = Andhra Pradesh; Ch. State = Chattisgarh State; DA = Dara Ambedkar; Dt. = District; leg. = Collector; KT = Karnataka State; NH = National Highway; PVS = P.V. Subba Reddy; TN = Tamilnadu State; vil. = village WB = West Bengal; YRR = Y. Ranga Reddy.

Key to Indian subfamilies of family Diaptomidae G. O. Sars, 1903

The family Diaptomidae has, in all, 4 subfamilies, of which two subfamilies occur in India, viz. Paradiaptominae and Diaptominae.

P1 exopod 3 with 2 outer marginal spines; right male antennule with three segments behind geniculation………………………………………………………………….Paradiaptominae Kiefer, 1932
P1 exopod 3 with only one outer marginal spine; male right antennule with four segments behind geniculation………………………………………………………………….Diaptominae Kiefer, 1932
N. B. In India, subfamily Paradiaptominae is represented by a solitary species, Paradiaptomus greeni (Gurney, 1906).

Key to Indian genera of subfamily Diaptominae Kiefer, 1932

1. Second exopodal segment of right male P5 with short but distinct distal lateral spinous process in addition to large proximal lateral spine…………………………..Allodiaptomus Kiefer, 1936
The same segment with only one lateral spine……………….2
2. Lateral spine inserted at about the middle of right male P5 exopod 2; right caudal ramus with distinct tooth-like chitinous structure at inner ventro-distal corner .......................................................... *Neodiaptomus* Kiefer, 1932

   The same spine distinctly proximal in position; right caudal ramus without such structure .......................................................... *Heliodiaptomus* Kiefer, 1932

3. Body large in size, measuring 2-3 mm in length .......................................................... 4

   Body moderate in size, length well below 2 mm .......................................................... 5

4. Outer marginal spines on P2-P4 modified into spatulate structures .......................................................... *Megadiaptomus* Kiefer, 1936

   The same normal .......................................................... *Spicodiaptomus* Rajendran, 1973

5. Terminal thumb of male left P5 characteristic, with transverse membranous folds; grasping antennule with comb-like spinous process .......................................................... *Sinodiaptomus* Kiefer, 1932

   Terminal thumb normal; spinous process on antepenultimate segment smooth .......................................................... 6

6. Male left P5 exopod 2-segmented with a pair of apical pincers; female P5 endopod unarmed .......................................................... *Arctodiaptomus* Kiefer, 1932

   Male left P5 exopod 1-segmented, ending in a spatula; female P5 endopod armed with 2 apical setae .......................................................................................................................... *Tropodiaptomus* Kiefer, 1932

7. Last segment of grasping antennule produced into a beak-like structure; female P5 endopod with 2 apical setae .......................................................... *Acanthodiaptomus* Kiefer, 1932

   The same without beak-like structure; female P5 endopod unarmed .......................................................... 8

8. Female P5 exopod 3 with unusually long hook-like spine ..........................................................

   .......................................................... *Keraladiaptomus* Silva, Kakkassery, Maas & Dumont, 1994

   Female P5 without such structure .......................................................................................................................... 9
9. Male right P5 coxa produced into a large lobe at inner corner; exopod 2 thin and leaf-like and endopod large; antepenultimate segment of grasping antennule with comb-like structure

Phyllodiaptomus Kiefer, 1936

Male right P5 coxa not produced at inner corner; exopod 2 normal and endopod small; antepenultimate segment of grasping antennule with staff-like spinous process

Eodiaptomus Kiefer, 1932