International Journal of Global Science Research **ISSN: 2348-8344 (Online)**
Vol. 7, Issue. 2, October 2020, pp. 1353-1375 **DOI: 10.26540/ijgsr.v7.i2.2020.158**
***Available Online* at www.ijgsr.com**

Research Paper

Studies on the fresh water Ostracoda from Villupuram, Trichy, Thiruvannamalai, Nilgiri and Chennai Districts of Tamil Nadu, India

J. Thilak and R. Sakthivel
Southern Regional Centre, Zoological Survey of India, 130-Santhome High Road, Chennai-28.
E-mail: jayasreethilak@yahoo.com ; sakthisrczsi@gmail.com

Received: 15/08/2020
Revised: 20/08/2020
Accepted: 28/08/2020

Abstract: The paper deals with the diversity and distribution of Ostracoda from the different localities of five selected districts of Tamil Nadu. The present study is comprises of 23 species of Ostracoda belonging to, 1 order, 14 genera under 2 families from Villupuram, Trichy, Thiruvannamalai, Nilgiri & Chennai districts of Tamil Nadu. Of the 23 species recorded five species viz., *Strandesia saetosa* Hartmann, 1964, *Heterocypris incongruens* (Ramdhor, 1808), *Cyprinotus cingalensis* Brady, 1886, *Stenocypris distincta* Victor & Fernando, 1978 and *Oncocypris voeltzkowi* G. W. Muller, 1898 are new reports to the state of Tamil Nadu. The most dominant species of Ostracoda was *Cypris granulata* Daday, 1898 which was recorded from all other districts except from Nilgiri. The diversity of Ostracods species were more in the district of Trichy when compared to the other selected districts.

Key words: Ostracoda, Diversity, Distribution, Species, Tamil Nadu.

INTRODUCTION:

Freshwater Ostracods commonly known as 'seed shrimps' are the neglected little crustaceans which are one of the most diverse group of crustaceans present in all aquatic ecosystems. Most species are benthic but some occur among aquatic vegetation and algal mats and a few are planktonic. Ostracoda plays an important role in the aquatic food chain (Forbes, 1888), acts as ecological indicators (Puri, 1964) and act as secondary hosts for a number of fish parasites (Hoff, 1942; Hoffman, 1967). Ostracods are also found to be parasitic to various species of freshwater crayfishes (Rioja, 1942, 1943; Hoff, 1943; Hobbs, 1967; Hobbs and Walton, 1967; Hobbs & Hobbs, 1970). The Ostracods plays an important role in paleoecological studies, (Benson and Mac-Donald, 1963; Delorme, 1969, 1971a, 1971b; Szczechura, 1971; Stout, 1975). These little crustaceans are also used as stratigraphic markers (Moore, 1961a; Howe, 1969). Major studies of

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

Ostracoda in Tamil Nadu were undertaken only from Madurai district. Hence an attempt was made to investigate the Ostracoda from other parts of Tamil Nadu as it is very essential to know the diversity of this group. Ostracods are considered as a separate class under the subphylum Crustacea and divided into the subclasses Myodocopa and Podocopa (Martin & Davis 2001; Horne *et. al*., 2002). The Subclass Podocopa has three orders such as the Platycopida, which includes marine and a very few brackish water forms; Podocopida which is present in both fresh & marine habitats and Palaeocopida which includes only fossils forms (Karanovic, 2012).

GLOBAL & INDIAN STATUS:

Globally there are 2330 species of Ostracods belonging to 270 genera, 17 families under 4 super families *viz*., such as Cypridoidea, Cytheroidea, Darwinuloidea and Terrestricytheroidea (Meish *et al*., 2019). As per the compiled valid list of Indian freshwater Ostracoda provided by Karuthapandi and Rao (2017), 154 species of freshwater Ostracods belonging to 5 families, 40 genera are documented from India. Of which the family Cyprididae representing 78%, Notodromadidae 9%, Candonidae 8%, Ilyocyprididae 4% and Darwinulidae 1% of species. The oriental region is the hotspot of fresh water Ostracoda diversity with 271 species (Martens *et al*., 2008), of which nearly 58% of the species are endemic to India within the oriental region Karuthapandi and Rao (2017).

Taxonomic studies on Indian Ostracoda were initiated by Baird (1959), Klie (1927), Arora (1931), Hartmann (1964), Deb (1972, 1973 & 1978), Victor & Michael (1975) and Battish (1978, 1981). Later 56 freshwater Ostracoda species belonging to 19 genera under 5 families were reported by Victor & Fernando (1979) from India. Of these 29 species of Ostracoda belonging to 16 genera and 4 families belonging to the super family Cypridacea are mostly from the Madurai district of Tamil Nadu. From the Western zone of Narmada basin Thilak *et.al*., (1994) reported 27 species of Ostracoda belonging to 7 genera under 1 family. From freshwater as well as marine habitats of India Venkataraman & Krishnamoorthy (1998) reported 120 species of Ostracoda. From the Chennai district of Tamil Nadu, Venkataraman (1999) recorded three species of freshwater Ostracoda. A checklist comprising of 38 species of Ostracoda belonging to 16 genera under 4 families from Maharashtra was reported by Patil & Talmalae (2005). From Madhya Pradesh including Chattisgarh, Harshey & Thilak (2011) reported 41 species of Ostracoda belonging to 3 families under 14 genera. A checklist of Indian Ostracoda comprising 152 valid species belonging to 39 genera, five families and two super families were reported by Karuthapandi *et. al*, (2014).

The present study is devoted for the diversity and distribution of Ostracods from the five selected districts of Tamil Nadu viz.. Villupuram, Trichy, Thiruvannamalai, Nilgiri and Chennai. These areas are selected on the basis of physiographic variations. The paper includes 23 species of Ostracoda belonging to 1 order 14 genera under 2 families from Tamil Nadu. Of these five species viz. *Strandesia saetosa* Hartmann, 1964, *Heterocypris incongruens* (Ramdhor, 1808), *Cyprinotus cingalensis* Brady, 1886, *Stenocypris distincta* Victor & Fernando, 1978 and *Oncocypris voeltzkowi* G. W. Muller, 1898 are new reports to the state of Tamil Nadu.

International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
Available Online at www.ijgsr.com

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

MATERIALS AND METHODS:

Ostracoda sample collections were made from the different localities of Nilgiri, Villupuram, Trichy, Thiruvannamalai & Chennai districts of Tamil Nadu during 2012 to 2015. Nearly 134 samples were collected and examined. The general map of Tamil Nadu showing the selected districts (Fig.1) and the coordinates of the collection localities were given as Table.1. Sample collections were done by sweeping the plankton net of bolting silk of mesh size 67µ among the water by disturbing the bottom. Samples were immediately fixed in10% formalin. The Ostracods were separated and transferred to vials containing 70% methanol. For dissection the Ostracods were removed to a glass cavity dish containing 70% alcohol and the valves were separated under a dissecting microscope using a pair of fine tungsten needles set in metal holders. The soft parts were transferred to a clean glass slide and the appendages were teased out in a drop of polyvinyl lacto-phenol. Then a cover slip was placed over the dissection using a drop of mountant. Taxonomic identification was carried out by detailed examination under higher magnification of stereo zoom microscope. Standard references viz. Edmondson (1959), Victor & Fernando (1979), Karanovic (2012) were followed. The species diversity, presence as well as the details of relative densities of reported species of Ostracods from the selected districts of Tamil Nadu during the present study was provided as Table - 2 & 3. Morphometric details of the identified species are given in Table - 4. Attempts were also made to record the male Ostracoda also. Some of the photographs of the recorded species of Ostracods were also provided (Plates- 1 - 4).

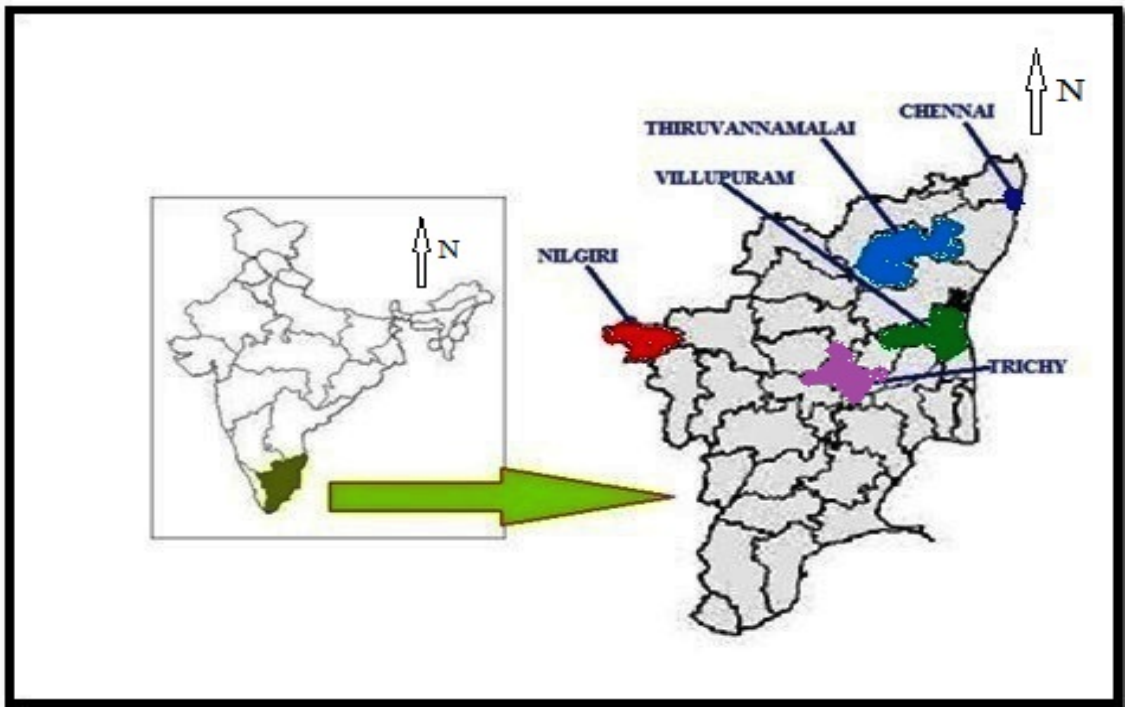


Figure 1. A general map of Tamil Nadu showing the selected districts as study areas.

International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
Available Online at www.ijgsr.com

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

Table- 1. Showing the coordinates of the sample collection localities of the study areas in the selected districts of Tamil Nadu.

No	Locality	Latitude	Longitude	Alt m/ ft	Date
VILLUPURAM DISTRICT					
1	Vikravandieri,Vikravandi.	N 12°01.932’	E079°32.534’	136 m	28-9-2012
2.	Vallarkoileri, Vallarkoil.	N 12°01.437’	E 079°33.688’	157 m	28-9-2012
3.	Orathur Mullanki Yeri, Orathur.	N 12°00.292’	E 079°29.631’	156 m	29-9-2012
4.	Thumbureri, Thumbur	N 12°01.550’	E 079°28.662’	272 m	29-9-2012
5	Melkaranai Temple Pond, Melkarani Village.	N 12°05.138’	E 079°25.976’	272 m	29-9-2012
6	Arasalapuram Periya Kulam, Arasalapuram.	N 12°06.234’	E 079°26.736’	285 m	29-9-2012
7	Valavanur Vinayagar Temple Pond, Valavanur.	N 11°55.189’	E 079°34.310’	116 m	30-9-2012
8	Valavanur Mettuthureri, Valavanur.	N 11°54.947’	E 079°34.647’	126m	30-9-2012
9	Udaintha Mandapam Pond, Near Edaiyur.	N 11°53.148’	E 079°20.753’	261 m	1-10-2012
10	Keerimatha Koil Pond, Ulundurpettai.	N 11°42.164’	E 079°17.094’	267 m	2-10-2012
11	Chellaiamman Kulam, Pudur.	N 11°43.950’	E 079°15.130’	200 m	2-10-2012
12	Kanthalvadi Pond, near to Arasur on the way to Ulundurpettai.	N 11°49.671’	E 079°25.503’	198 m	2-10-2012
13	Vilangambadi Pond, Vilangambadi Village.	N 12°07.959’	E 079°35.486’	172 m	4-10-2012
14	T- Kenipet Pond, T- Kenipet	N 12°10.640’	E 079°36.518’	180 m	4-10-2012
15	Pathamangalam Pond, Pathamangalam Village.	N 12°10.816’	E 079°36.322’	168m	4-10-2012
16	Veeranampattu Pond, on the way to Trikkovilur	N 11°53.390’	E 079°17.340’	300ft	23-8-2013
17	Kanthalavadi Yeri, Kanthalavadi	N 11°49.541’	E 079°25.492’	221ft	23-8-2013
18	Arasurlotus Pond, Ulundurpettai Road.	N 11°49.695’	E 079°25.513’	217ft	23-8-2013
19	Asanurkoil Pond, Jyothimeenakshi Nagar.	N 11°37.780’	E 079°11.371’	294ft	24-8-2013
20	Ponnuru Pond	N 11°56.225’	E 079°24.449’	231ft	25-8-2013
21	Parnur Village Pond, Parnur	N 11°58.217’	E 079°17.270’	329ft	26-8-2013

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

22	Mailam Temple Pond	N 12°07.571’	E 079°37.095’	254ft	26-8-2013
23	Sivankoil Pond, Pathirapuliyur Village.	N 12°05.917’	E 079°35.370’	168ft	26-8-2013
24	Vikravandieri, Vikravandi	N 12°02.032’	E 079°32.507’	150ft	26-8-2013
25	Papparaikulam, Mailam	N 12°05.578’	E 079°36.701’	251ft	26-8-2013
TRICHY DISTRICT					
1	Vahaikulam ,Manaparai.	N 10°36.410’	E 078°25.812’	547ft	6-10-2012
2	Kuchilium Pond, Kuchiliumpetti Village	N 10°41.235’	E 078°35.285’	374m	6-10-2012
3	Viyampattipond, Viyampatti Village.	N 10°41.240’	E 078°35.300’	205m	7-10-2012
4	Kothamangalam Yeri, Kothamangalam Village	N 10°45.923’	E 078°38.245’	274m	7-10-2012
5	Nedumalaieri, Nedumalai.	N 10°46.781’	E 078°37.099’	303m	7-10-2012
6	Nedumalai Karinkal Quary Ditch, Nedumalai Village.	N 10°46.686’	E 078°37.431’	324m	7-10-2012
7	Ranganathasamy Temple Pond Srirangam.	N 10°51.780’	E 078°41.087’	235m	8-10-2012
8	Kallanai Dam, Kallanai.(The Junction Point of Vennaar & Cauvery).	N 10°49.927’	E 078°49.146’	296m	8-10-2012
9	Thiruvellarai Usalavan Kulam, Thiruvellarai	N 10°57.787’	E 078°40.276’	372m	9-10-2012
10	Vannan Kuttai Thiruvellarai.	N 10°57.977’	E 078°40.226’	387m	9-10-2012
11	Achampatti Yeri, Achampatti.	N 10°33.487’	E 078°19.379’	205m	10-10-2012
12	Panjapur Chakkadai Kulam ,Edamalpur Bypass .	N 10°45.534’	E 078°39.496’	284m	10-10-2012
13	Panjapureri, Panjapur Village.	N 10°45.440’	E 078°39.451’	285m	10-10-2012
14	Muthumariamman Koil Pond, Thulasi Nagar.	N 10°46.073’	E 078°40.063’	302m	10-10-2012

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

15	Korai River, Edumalaipudur.	N 10°46.071’	E 078°39.782’	205m	10-10-2012
16	Manikandapuram Yeri, Bypass Road	N 10°44.254’	E 078°38.168’	205m	10-10-2012
17	Panguni River, Lalgudi.	N 10°53.320’	E 078°47.344’	250m	11-10-2012
18	Kathirikulam, Pullambadi.	N 10°56.440’	E 078°54.256’	252m	11-10-2012
19	Poovalureri, Lalgudi	N 10°54.338’	E 078°50.482’	247m	11-10-2012
20	Vadaikondanmalai aaru, Urayoour	N 10°48.915’	E 078°39.748’	266m	12-10-2012
21	Muniappan Kulam, Manaparai.	N 10°36.045’	E 078°25.622’	565ft	17-8-2013
22	Vinayakarurni Kulam, Karayampatti	N 10°40.960’	E 078°30.961’	445ft	17-8-2013
23	Karikkan Kulam, Manaparai	N 10°36.197’	E 078°25.468’	573ft	17-8-2013
24	Vahai Kulam, Viralimalai Road	N 10°36.341’	E 078°25.788’	544ft	17-8-2013
25	Kallanai Dam Site, Trichy	N 10°50.052’	E 078°48.893’	296ft	19-8-2013
26	Odai near Mussiri, Trichy.	N 10°57.677’	E 078°25.450’	346ft	20-8-2013
27	Thuraiyureri, Thuraiyur.	N 11°08.923’	E 078°35.676’	520ft	20-8-2013
28	Viyampatti Pond, Viyampatti Village.	N10°33.119’	E 078°18.369’	727ft	21-8-2013
THIRUVANNAMALAI DISTRICT					
1	Agnitheertham	N 12°13.488’	E 079°03.728’	616ft	20-12-2012
2	Nachipattu Yeri, Sri Ambalnagar	N 12°13.818’	E 079°05.869’	536ft	20-12-2012
3	Sudukattu Kulam, Adiannamalai.	N 12°15.269’	E 079°02.574’	171ft	20-12-2012
4	Sonanadi Kulam	N 12°13.569’	E 079°02.159’	240ft	20-12-2012
5	Somaskattu Kulam	N 12°14.319’	E 079°10.512’	208ft	20-12-2012

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

6	Mariammankoil Kulam, Adiannamalai	N 12°15.229’	E 079°04.150’	550ft	20-12-2012
7	Saraswathinagar Pond, Melpachandur Village	N 12°11.735’	E 079°05.030’	568ft	21-12-2012
8	Sattanur Dam, Sattanur	N 12°10.803’	E 078°50.753’	759ft	21-12-2012
9	A nala near graveyard, Thandranpattu, Sattanur	N 12°09.109’	E 078°57.159’	575ft	21-12-2012
10	Omakulam, Eradi Village	N 12°07.727’	E 078°04.357’	504ft	21-12-2012
11	Sitheri, Melpudur Village	N 12°20.163’	E 079°00.065’	725ft	22-12-2012
12	Cheyyaar River, Kalasapakkam	N 12°22.984’	E 079°57.838’	555ft	22-12-2012
13	Kattuthullah Yeri, Kadaladi	N 12°24.557’	E 078°58.352’	688ft	22-12-2012
14	Kaliamman Kulam	N 12°16.031’	E 079°00.283’	642ft	22-12-2012
15	Peria Yeri, C. Gangapatti	N 12°20.361’	E 078°59.118’	704ft	22-12-2012
16	Mashareri, Mashar Village	N 12°21.605’	E 079°01.054’	683ft	22-12-2012
17	Naidumangalam Yeri	N 12°24.133’	E 079°05.859’	605ft	23-12-2012
18	Chinnakozha Kuttai	N 12°17.925’	E 079°03.289’	607ft	23-12-2012
19	Munindrasatram Yeri, Satram	N 12°17.796’	E 079°04.151’	602ft	23-12-2012
20	Pudupettai Mariamman Koil Pond, Kalasapakkam	N 12°26.348’	E 079°06.516’	590ft	23-12-2012
21	Polur Yeri, Polur	N 12°30.817’	E 079°08.366’	537ft	23-12-2012
22	Pudupettai Mariamman Temple Pond, Kalasapakkam	N 12°26.348’	E 079°06.516’	590ft	23-12-2012
23	Thoppukulam, Inamkariyamthangal Village, Thurinjapuram	N 12°17.598’	E 079°03.039’	593ft	23-12-2012
24	Naidumangalam Temple Pond	N 12°24.179’	E 079°06.135’	573ft	23-12-2012
25	Nukkambadi Village Pond	N 12°18.466’	E 079°08.104’	622ft	24-12-2012
26	Inamkariyamthangal Yeri, Thurinjapuram	N 12°17.418’	E 079°03.071’	607ft	23-12-2012
27	Thuringilaar, Kilipattuthugasai Bridge, Kilipattu	N 12°16.234’	E 079°05.788’	547ft	24-12-2012
28	Nukkambadi Koil Kulam	N 12°18.466’	E 079°08.104’	605ft	24-12-2012
29	Bhagawankoil Kulam, Chetpetkrishna Nagar	N 12°26.685’	E 079°21.161’	568ft	24-12-2012
30	Athinthal Yeri, Mangalampudur	N 12°19.395’	E 079°09.838’	596ft	24-12-2012
31	Varattu Kulam, Avalurpettai	N 12°20.834’	E 079°15.018’	494ft	24-12-2012

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

32	Sakkara Kulam	N 12°13.645’	E 079°03.852’	630ft	25-3-2014
33	Agnitheertham	N 12°13.488’	E 079°03.728’	616ft	25-3-2014
34	Esanyalingam Koil Pond, Tendranagar	N 12°14.787’	E 079°04.440’	626ft	25-3-2014
35	Unnamalaiamman Koil Pond, Athiyanthal Panchayat	N 12°14.299’	E 079°01.908’	681ft	25-3-2014
36	Nirthilinga Kulam, Aanapiranthal Village	N 12°14.062’	E 079°01.943’	676ft	25-3-2014
37	Vanapuram Temple Pond	N 12°05.774’	E 079°00.891’	520ft	26-3-2014
38	Poomantham Kulam, Mariamman Koil Street	N 12°13.163’	E 079°03.994’	627ft	26-3-2014
39	Nelthali Kulam, Vanapuram	N 12°06.589’	E 079°01.248’	546ft	26-3-2014
40	Kallu Kuttai, Vinayakapuram, Meyyur	N 12°09.064’	E 079°01.912’	645ft	26-3-2014
41	Thamara Kulam, Thamaranagar	N 12°13.237’	E 079°03.829’	610ft	26-3-2014
42	Sitherikkara Yeri, Vaanapuram	N 12°06.430’	E 079°01.102’	552ft	26-3-2014
43	Parvatha Kulam, Thyagiannamalai Nagar	N 12°14.216’	E 079°04.550’	567ft	27-3-2014
44	Nachipattu Yeri, Sri Ambalnagar	N 12°13.818’	E 079°05.869’	536ft	27-3-2014
45	Kinathur Yeri, Kinathur Village	N 12°13.472’	E 079°05.545’	548ft	27-3-2014
NILGIRI DISTRICT					
1	Irumbupalam, Devala River, Nilgiri	N 11°29.663’	E 076°26.977’	2827ft	08-03-2013
2	Ooty Lake, Ooty.	N 11°24.335’	E 076°40.822’	7273ft	22-03-2014
3	Kundha Dam, Ooty.	N 11°16.883’	E 076°38.768’	5373ft	23-03-2014
CHENNAI DISTRCIT					
1	Kolathur Yeri,	N 12°56.926’	E 080°12.032’	55ft	15-2-2015
2	Pallavaram Pond, Pallavaram	N 12°57.519’	E 080°07.109’	101ft	31-1-2015
3	Natham Kuttai, Thirumudivakkam	N 12°59.128’	E 080°05.387’	78ft	31-1-2015
4	Thiruneermalai Koil Pond, Thiruneermalai	N 12°57.754’	E 080°06.795’	106ft	31-1-2015
5	Porur lake, Porur	N 13°02.138’	E 080°08.941’	19ft	31-1-2015
6	Chembarampakkam Lake	N 12°59.297’	E 080°03.865’	135ft	31-1-2015
7	Nelthali Kuttai, Thirumudivakkam	N 12°59.128’	E 080°05.387’	78ft	31-1-2015

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

8	Srinivasa Koil Pond, Chettiyaragaram	N 13°02.914’	E 080°09.737’	59ft	31-1-2015
9	Kundathurmurugan Koil Pond, Koraiurachi	N 12°59.050’	E 080°05.529’	71ft	31-1-2015
10	Agastheeswara Koil Pond, Valsaravakkam	N 13°02.492’	E 080°10.665’	50ft	31-1-2015
11.	Srikulathur Kuttai, Srikulathur, on the way to Chembarampakkam	N 12°59.664’	E 080°04.518’	90ft	31-1-2015
12.	Thiruneermalaiaar. Aathur Bridge, Near Thiruneermalai, SIDCO	N 12°57.936’	E 080°06.647’	70ft	31-1-2015
13	Srikulathur Yeri, Sriperambadur Road	N 12°59.686’	E 080°04.991’	78ft	31-1-2015
14	Kundathureri, Kulathur	N 13°00.279’	E 080°06.227’	56ft	31-1-2015
15.	Vellanur Pond , Avadi	N 13°09.754’	E 080°06.803’		14-2-2015
16.	Solavaram Yeri	N 13°13.162’	E 080°09.221’	69ft	14-2-2015
17	Ethachtamman Koil Pond, Alamathi	N 13°12.403’	E 080°06.818’	88ft	14-2-2015
18.	Vathu Kuttai, Kollumedu	N 13°09.869’	E 080°07.033’	107ft	14-2-2015
19	Edappalayam Kuttai, Redhills Road	N 13°12.525’	E 080°08.790’	91ft	14-2-2012
20	Retta Kulam, Solavaram Road	N 13°13.123’	E 080°09.722’	42ft	14-2-2015
21	Palpinnipinpuram Yeri, Alamathi	N 13°12.495’	E 080°06.447’	97ft	14-2-2015
22	Renganathanagar Pond, Korattur	N 13°06.960’	E 080°11.848’	50ft	14-2-2015
23	Puzhal Lake, Puzhal	N 13°11.168’	E 080°11.406’	44ft	14-2-2015
24	Retteri, Lake Lekshmipuram	N 13°08.243’	E 080°12.706’	48ft	14-2-2015
25	Vellakkaleri, Vellakkal	N 12°55.709’	E 080°10.919’	60ft	15-2-2015
26	Athampakkam Yeri, Thillaiannanagar	N 12°59.210’	E 080°11.740’	110ft	15-2-2015
27	Karthikapuram Yeri	N 12°57.874’	E 080°11.472’	-	15-2-2015
28	Puzhithavakkam Yeri, Puzhithavakkam	N 12°57.992’	E 080°12.133’	43ft	15-2-2015
29	Keelkattalai Yeri, Keelkattalai	N 12°56.995’	E 080°10.777’	45ft	15-2-2015
30	Medavakkam Yeri, Medavakkam	N 12°55.013’	E 080°11.055’	43ft	15-2-2015
31	Kovilampakkam Yeri	N 12°56.515’	E 080°11.434’	19ft	15-2-2015
32	Pedariamman Koil Pond, Nanmangalam	N 12°56.347’	E 080°10.667’	78ft	15-2-2015
33	Velacheri Yeri, Velacheri	N 12°59.275’	E 080°13.006’	59ft	15-2-2015

International Journal of Global Science Research **ISSN: 2348-8344 (Online)**
Vol. 7, Issue. 2, October 2020, pp. 1353-1375 **DOI: 10.26540/ijgsr.v7.i2.2020.158**
***Available Online* at www.ijgsr.com**

SYSTEMATIC LIST OF OSTRACODA IDENTIFIED FROM VILLUPURAM, TRICHY, TIRUVANNAMALAI, NILGIRI AND CHENNAI DISTRICTS OF TAMIL NADU.

Phylum ARTHROPOD von Siebold, 1848
Subphylum CRUSTACEA Brunich, 1772
Class OSTRACODA Latrielle, 1806
Subclass PODOCOPA Sars, 1886
Order PODOCOPIDA Sars, 1866
Suborder CYPRIDOCOPINA Baird, 1845
Super family CYPRIDOIDEA Baird, 1845
Family CYPRIDIDAE Baird, 1845
Subfamily CYPRETTINAE Hartmann, 1971

Genus ***Cypretta*** Vavra, 1895

1. *Cypretta alagarkoilensis* Victor & Michael, 1975
2. *Cypretta fontinalis* Hartmann, 1964

Subfamily CYPRICERCINAE McKenzie, 1971

Genus ***Pseudostrandesia*** Martens, K. & Savatenalinton 2009

3. *Pseudostrandesia calapanensis*, Tressler, 1937

Genus ***Strandesia*** Stuhlmann, 1888

4. *Strandesia labiata* Hartmann, 1964
5. *Strandesia saetosa* Hartmann, 1964*

Genus ***Bradleystrandesia*** Broodbakker, 1983

6. *Bradleystrandesia parva* Hartmann, 1864

Subfamily CYPRIDINAE Baird, 1845

Genus ***Cypris*** O.F. Muller, 1776

7. *Cypris granulata* Daday, 1898
8. *Cypris protubera* Victor & Fernando 1979
9. *Cypris dravidensis* Victor &Fernando, 1975

Subfamily CYPRINOTINAE Bronstein, 1947

Genus ***Heterocypris*** Claus, 1892

10. *Heterocypris nudus* Victor & Michael, 1975
11. *Heterocypris incongruens* (Ramdhor 1808)*

Genus ***Cyprinotus*** Brady, 1886

12. *Cyprinotus cingalensis* Brady, 1886*

Genus ***Hemicypris*** Sars, 1903

13. *Hemicypris anomala* (Klie, 1938)
14. *Hemicypris falcatus* Victor & Fernando, 1976

Subfamily HERPETOCYPRIDINAE Kaufmann, 1900

Genus ***Stenocypris*** Sars, 1889

15. *Stenocypris distincta* Victor & Fernando, 1978*
16. *Stenocypris major* (Baird, 1859)
17. *Stenocypris hislopi* (Ferguson) 1969

Genus ***Chrissia*** Hartmann, 1957

18. *Chrissia halyi* (Ferguson, 1969)
19. *Chrissia humilis* (Klie, 1932)

Subfamily CYPRIDOPSINAE Kaufmann, 1900
Tribe CYPRIDOPSINI Kaufmann, 1900

Genus ***Plesiocypridopsis*** Rome, 1965

20. *Plesiocypridopsis dispar* Hartmann, 1964

Genus ***Cypridopsis*** Brady, 1868

21. *Cypridopsis madurensis* Victor & Michael, 1975

Family NOTODROMADIDAE Kaufmann, 1900
Subfamily ONCOCYPRIDINAE De Deckker, 1979

Genus ***Oncocypris*** G.W. Muller, 1898

22. *Oncocypris voeltzkowi* G.W .Muller, 1898*

Genus ***Centrocypris*** Vavra, 1895

23. *Centrocypris matthaii* (Arora, 1931)

*Represents the species which are recorded as new reports to the state of Tamil Nadu.

International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
Available Online at www.ijgsr.com

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

Table- 2: Showing the species diversity& presence of the reported Ostracods from the selected districts of Tamil Nadu during the present study.

No	Name of Species	Districts				
		Villupuram	Trichy	Thiruvannamalai	Nilgiri	Chennai
1	*Cypretta alagarkoilensis* Victor & Michael, 1975	-	-	*	-	-
2	*Cypretta fontinalis* Hartmann, 1964	-	-	*	-	-
3	*Pseudostrandesia calapanensis*, Tressler, 1937	*	*	*	-	*
4	*Strandesia labiata* Hartmann, 1964	*	*	*	*	*
5	*Strandesia saetosa* Hartmann, 1964	*	*	*	-	*
6	*Bradleystrandesia parva* Hartmann, 1864	*	*	*	*	*
7	*Cypris granulata* Daday, 1898	*	*	*	-	*
8	*Cypris protubera* Victor & Fernando1979	*	*	-	-	-
9	*Cypris dravidensis* Victor & Fernando, 1975	*	-	-	-	-
10	*Heterocypris nudus* Victor & Michael, 1975	*	*	-	-	*
11	*Heterocypris incongruens* (Ramdhor, 1808)	*	*	-	-	-
12	*Cyprinotus cingalensis* Brady, 1886	*	*	-	-	-
13	*Hemicypris anomala* (Klie,1938)	-	*	-	-	-
14	*Hemicypris falcatus* Victor & Fernando,1976	-	*	-	-	-
15	*Stenocypris distincta* Victor &Fernando, 1978	-	*	-	-	-
16	*Stenocypris major* (Baird, 1859)	-	*	-	-	*
17	*Stenocypris hislopi* (Ferguson) 1969	-	*	-	-	*
18	*Chrissia halyi* (Ferguson) 1969	*	*	*	-	*
19	*Chrissia humilis* (Klie,1932)	*	*	-	-	-
20	*Plesiocypridopsis dispar* Hartmann, 1964	*	*	-	-	-
21	*Cypridopsis madurensis* Victor & Michael, 1975	-	*	-	-	-
22	*Oncocypris voeltzkowi* G.W .Muller, 1898	*	-	-	-	*
23	*Centrocypris matthai* (Arora, 1931)	*	-	-	-	-

*shows the presence of Ostracods in the selected districts.

International Journal of Global Science Research **ISSN: 2348-8344 (Online)**
Vol. 7, Issue. 2, October 2020, pp. 1353-1375 **DOI: 10.26540/ijgsr.v7.i2.2020.158**
***Available Online* at www.ijgsr.com**

Table-3: Showing the details of relative densities and percentage composition of the reported species of Ostracods from the selected districts of Tamil Nadu during the present study.

No	Name of Species	Districts									
		Villupuram		Trichy		Thiruvannamalai		Nilgiri		Chennai	
		No	%	No	%	No	%	No	%	No	%
1	*Cypretta alagarkoilensis* Victor & Michael, 1975	-	-	-	-	2.00	1.70	-	-	-	-
2	*Cypretta fontinalis* Hartmann, 1964	-	-	-	-	7.00	5.98	-	-	-	-
3	*Pseudostrandesia calapanensis* Tressler, 1937	12.00	12.76	9.00	5.56	23.00	19.66	-	-	25.00	23.58
4	*Strandesia labiata* Hartmann, 1964	6.00	6.38	20.00	12.35	4.00	3.42	2.00	50.00	9.00	8.49
5	*Strandesia saetosa* Hartmann, 1964	7.00	7.45	16.00	9.88	19.00	16.24	-	-	12.00	11.32
6	*Bradleystrandesia parva* Hartmann, 1864	2.00	2.13	6.00	3.70	7.00	5.98	2.00	50.00	7.00	6.61
7	*Cypris granulata* Daday, 1898	41.00	43.61	40.00	24.69	21.00	17.95	-	-	10.00	9.43
8	*Cypris protubera* Victor & Fernando1979	3.00	3.19	4.00	2.47	-	-	-	-	-	-
9	*Cypris dravidensis* Victor & Fernando, 1975	2.00	2.13	-	-	-	-	-	-	-	-
10	*Heterocypris nudus* Victor & Michael, 1975	1.00	1.06	9.00	5.56	-	-	-	-	12.00	11.32
11	*Heterocypris incongruens* (Ramdhor, 1808)	5.00	5.32	20.00	12.35	-	-	-	-	-	-
12	*Cyprinotus cingalensis* Brady, 1886	6.00	6.38	1.00	0.62	-	-	-	-	-	-
13	*Hemicypris anomala* (Klie,1938)	-	-	8.00	4.94	-	-	-	-	-	-
14	*Hemicypris falcatus* Victor & Fernando,1976	-	-	2.00	1.23	-	-	-	-	-	-
15	*Stenocypris distincta* Victor & Fernando, 1978	-	-	2.00	1.23	-	-	-	-	-	-
16	*Stenocypris major* (Baird, 1859)	-	-	5.00	3.08	-	-	-	-	2.00	1.89
17	*Stenocypris hislopi* (Ferguson, 1969)	-	-	5.00	3.08	-	-	-	-	4.00	3.77
18	*Chrissia halyi* (Ferguson, 1969)	6.00	6.38	8.00	4.94	5.00	4.27	-	-	3.00	2.83
19	*Chrissia humilis* (Klie, 1932)	2.00	2.13	1.00	0.62	-	-	-	-	-	-
20	*Plesiocypridopsis dispar* Hartmann, 1964	-	-	4.00	2.47	-	-	-	-	-	-
21	*Cypridopsis madurensis* Victor & Michael, 1975	-	-	2.00	1.23	-	-	-	-	-	-
22	*Oncocypris voeltzkowi* G.W .Muller, 1898	-	-	-	-	24.00	20.51	-	-	22.00	20.75
23	*Centrocypris matthai* (Arora, 1931)	1.00	1.06	-	-	5.00	4.27	-	-	-	-
	Total	94.00	19.00	162.00	34.00	117.00	24.00	4.00	1.00	106.00	22.00

International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
Available Online at www.ijgsr.com

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

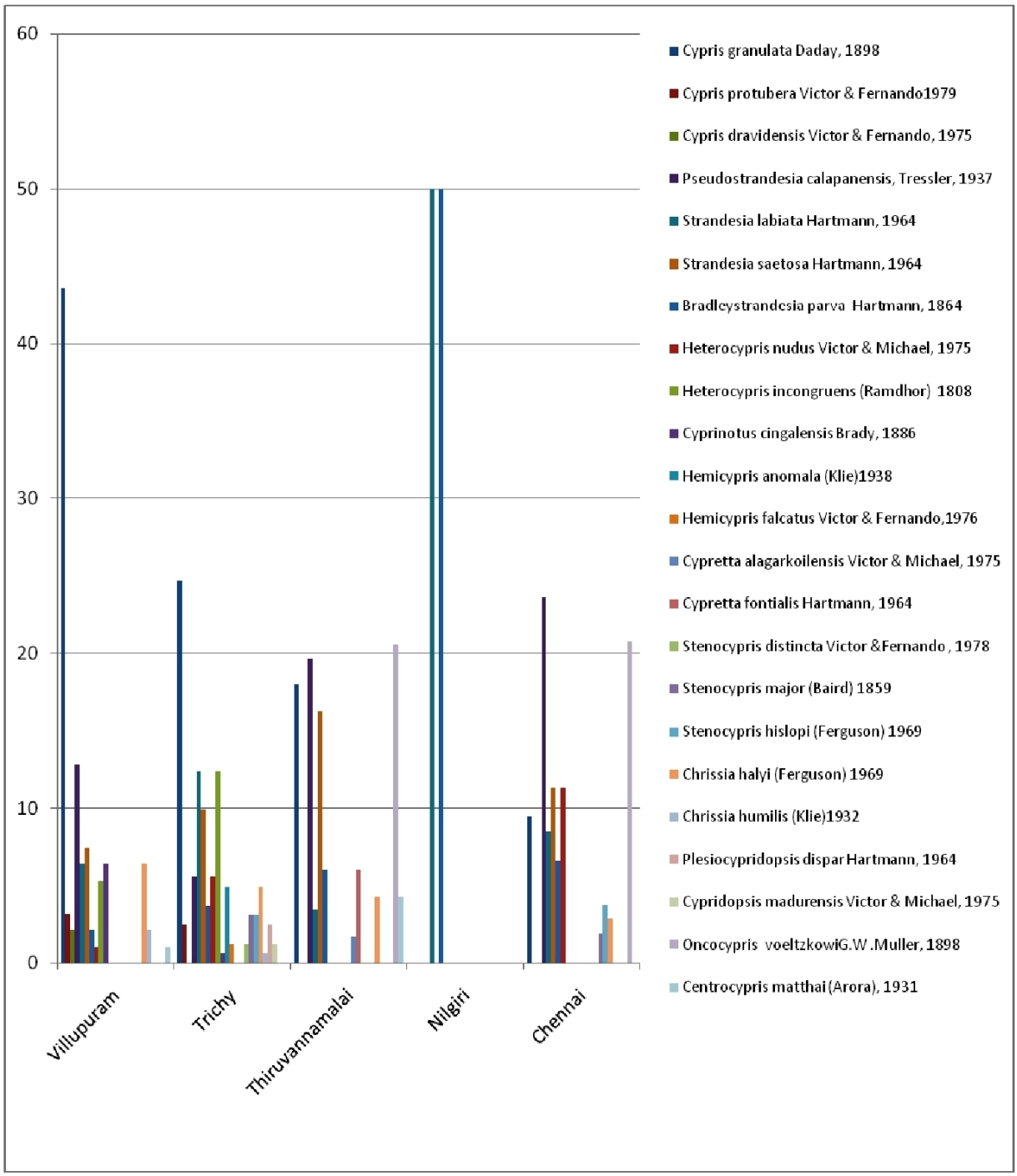
Table-4: Showing morphometric details of Ostracods recorded during the study.

No	Name of species	Length	Height
1	*Cypretta alagarkoilensis* Victor & Michael, 1975	0.65-0.67mm	0.45-0.48mm
2	*Cypretta fontinalis* Hartmann, 1964	0.53-0.54mm	0.60-0.63mm
3	*Pseudostrandesia calapanensis* Tressler, 1937	0.88- 0.95mm	0.45-0.48mm
4	*Strandesia labiata* Hartmann, 1964	1.17-1.32mm	0.61-0.63mm
5	*Strandesia saetosa* Hartmann, 1964	0.69 -0.70mm	0.31-0.32mm
6	*Bradleystrandesia parva* Hartmann, 1864	0.64-0.63mm	0.36-0.37mm
7	*Cypris granulata* Daday, 1898	1.42-1.45mm	0.92-0.94mm
8	*Cypris protubera* Victor & Fernando1979	1.50-1.53mm	0.94-0.98mm
9	*Cypris dravidensis* Victor & Fernando, 1975	1.38-1.50mm	0.89-1.12mm
10	*Heterocypris nudus* Victor & Michael, 1975	1.21-1.31mm	0.72-0.8mm
11	*Heterocypris incongruens* (Ramdhor,1808)	1.23-1.20mm	0.71-0.79mm
12	*Cyprinotus cingalensis* Brady, 1886	1.20-1.10mm	0.82-0.76mm
13	*Hemicypris anomala* (Klie,1938)	0.70-0.75mm	0.40-0.45mm
14	*Hemicypris falcatus* Victor & Fernando,1976	0.87-0.90mm	0.50-0.52mm
15	*Stenocypris distincta* Victor &Fernando , 1978	2.85-3.20mm	1.02-1.18mm
16	*Stenocypris major* (Baird,1859)	1.90-2.23mm	0.73-0.88mm
17	*Stenocypris hislopi* (Ferguson) 1969	1.38-1.64mm	0.55-0.70mm
18	*Chrissia halyi* (Ferguson,1969)	1.40-1.60mm	0.41-0.56mm
19	*Chrissia humilis* (Klie,1932)	1.40-1.60mm	0.41-0.53mm
20	*Plesiocypridopsis dispar* Hartmann, 1964	0.56-0.61mm	0.29-0.34mm
21	*Cypridopsis madurensis* Victor & Michael, 1975	0.55-0.63mm	0.35-0.37mm
22	*Oncocypris voeltzkowi* G.W .Muller, 1898	0.50-0.61mm	0.32-0.34mm
23	*Centrocypris matthai* (Arora, 1931)	0.95-0.97mm	0.61-0.62mm

International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
Available Online at www.ijgsr.com

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

Fig -2. Bar diagram showing the species wise percentage composition of Ostracods from the selected districts.



International Journal of Global Science Research **ISSN: 2348-8344 (Online)**
Vol. 7, Issue. 2, October 2020, pp. 1353-1375 **DOI: 10.26540/ijgsr.v7.i2.2020.158**
***Available Online* at www.ijgsr.com**

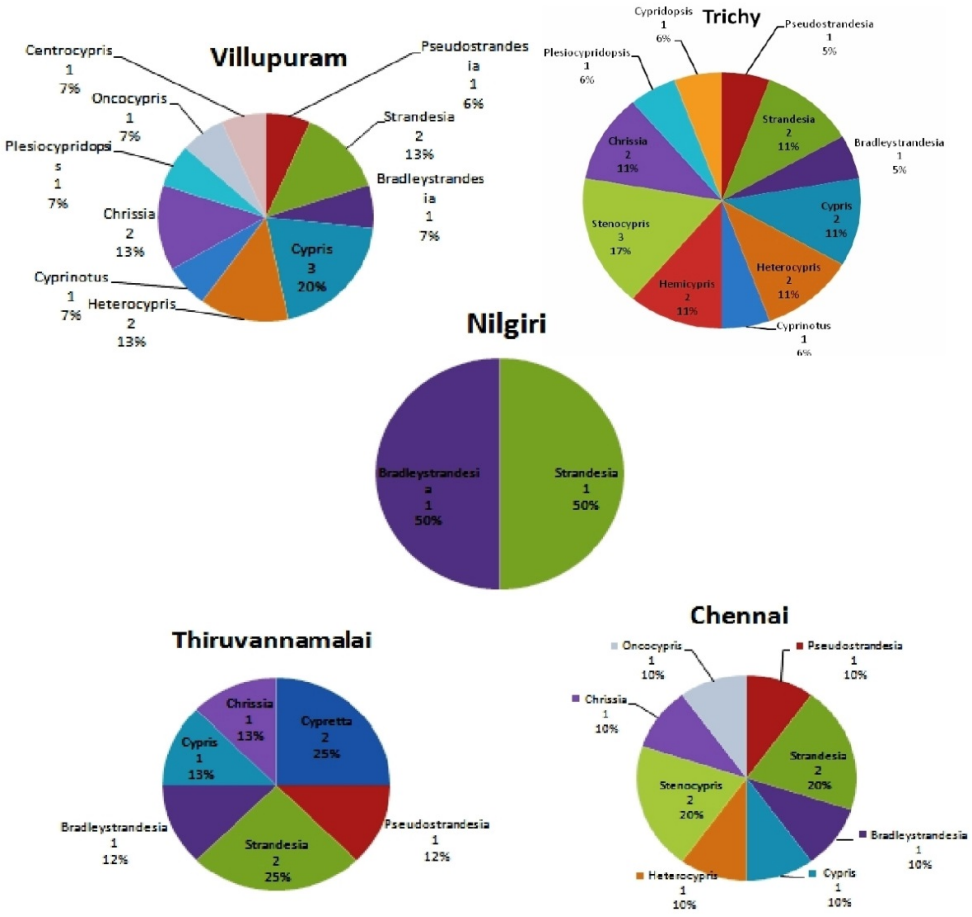


Figure -3. Pie Charts showing the genera wise percentage composition of Ostracods from the selected districts.

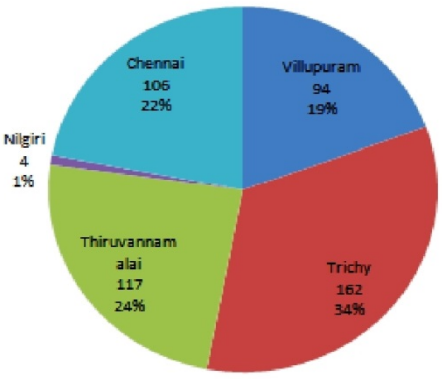


Figure -4. Pie Chart showing the overall diversity of Ostracods from the selected districts.

International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
Available Online at www.ijgsr.com

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

Table-5: Showing the district wise representation of genera and number of species recorded during the present study.

No	Name of genera	Name of districts & No species identified				
		Villupuram	Trichy	Thiruvannamalai	Nilgiri	Chennai
1	*Cypretta* Vavra, 1895	-	-	2	-	-
2	*Pseudostrandesia* Martens, K. & Savatenalinton 2009	1	1	1	-	1
3	*Strandesia* Stuhlmann, 1888	2	2	2	1	2
4	*Bradleystrandesia* Broodbakker, 1983	1	1	1	1	1
5	*Cypris* O. F. Muller, 1776	3	2	1	-	1
6	*Heterocypris* Claus, 1892	2	2	-	-	1
7	*Cyprinotus* Brady, 1886	1	1	-	-	-
8	*Hemicypris* Sars, 1903	-	2	-	-	-
9	*Stenocypris* Sars ,1889	-	3	-	-	2
10	*Chrissia* Hartmann ,1957	2	2	1	-	1
11	*Plesiocypridopsis* Rome,1965	1	1	-	-	-
12	*Cypridopsis* Brady, 1868	-	1	-	-	-
13	*Oncocypris* G. W. Muller, 1898	1	-	-	-	1
14	*Centrocypris* Vavra, 1895	1	-	-	-	-

RESULTS AND DISCUSSION:

The present study reports 23 species of Ostracoda belonging to 14 genera under 2 families from Villupuram, Trichy, Thiruvannamalai, Nilgiri and Chennai districts of Tamil Nadu. Out of 23 species recorded, five species viz. *Strandesia saetosa* Hartmann, 1964, *Heterocypris incongruens* (Ramdhor 1808), *Cyprinotus cingalensis* Brady, 1886, *Stenocypris distincta* Victor & Fernando, 1978 and *Oncocypris voeltzkowi* G. W. Muller, 1898 are new reports to the state of Tamil Nadu. The species *Cypris granulata* Daday, 1898 was recorded from all the selected districts except from the district Nilgiri. The genera *Cypris* and *Stenocypris* were represented by 3 species each. Other genera viz. *Strandesia*, *Heterocypris*, *Hemicypris*, *Cypretta*, *and Chrissia* were represented by two species and *Pseudostrandesia*, *Bradellastrandesia*, *Cyprinotus*, *Plesiocypridopsis*, *Cypridopsis*, *Oncocypris* and *Centrocypris* were represented by one species each (Tab-2, 3 & 5) & (Fig.2). The two species viz. *Strandesia labiata* Hartmann, 1964 and *Bradellastrandesia parva* Hartmann, 1864 were recorded from all the four districts. Out

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

of the five families of Indian Ostracoda the representatives of only two families' viz. Cyprididae, Notodromadidiae could be recorded from Tamil Nadu during the present study. The family Cyprididae represents 22 species and the family Notodromadidae is represented by 1 species (Table-2&3) (Fig.3). This shows the dominancy of the single family Cyprididae in Tami Nadu. The other families viz. Cyclocyprididae, Eucandonidae and Ilyocyprididae are totally unpresent during the present study. The morphometric details of the recorded Ostracods show that there is not much variation from earlier records (Table-4). The male specimens of *Oncocypris voeltzkowi* G. W. Muller, 1898 were also recorded. The overall relative densities and percentage composition of the reported species of Ostracods were maximum in Trichy district (34%) followed by Thiruvannamalai (24%), Chennai (22%) and Villupuram (19%), and the minimum in Nilgiri district (1%) during the present study period (Table-3, Fig.4).

ACKNOWLEDGEMENTS:
The authors are thankful to The Director, Zoological Survey of India and to The Officer-in-Charge, Southern Regional Centre, Zoological Survey of India, Chennai for providing necessary facilities and encouragements. They are also thankful to all the members of the survey team.

REFERENCES:
Forbes S. A. (1888) Studies on the food of freshwater fishes. Bull. III. Lab. Nat. Hist. 2, 433-358.
Puri H. S. (1964) Ostracods as ecological and paleoecological indicators. Publicassionidella Stazione Zoologica di Napoli. 33 supplemento (Symposia, 1963).
Hoff C. C. (1942) Ostracoda of Illinois, their biology and taxonomy. Ill. Biol. Monogr. 19, 1-196.
Hoffman G. L. (1967) Parasites of North American Fishes. Univ. California Press, 486.
Rioja E. (1942) Estuidos Carcinologics XIII. Consideraciones y datos Aceradel Genero Entocythere (Crust. Ostracods) yalgunas de sus species, con description de una Nueva. An. Inst. Biol. Univ. Nac. Auton. Mex. 13, 685-697.
Rioja E. (1943) Estuidos Carcinologics XXI. Contribucion al conocimiento de las species del Genero Entocythere de Mexico. An. Inst. Biol. Univ. Nac. Auton. Mex. 20, 553-566.
Hoff C. C. (1943) Seasonal changes in the Ostracoda fauna of temporary ponds. *Ecology*. 24, 116-118.
Hobbs H. H. (1967) A new genus and three new species of Ostracods with a key to genus Dactylocythere (Ostracoda, Entocytheridae). Proc. U.S. natn. Mus.(Nat) 122, 1-10.
Hobbs H. H and Walton M. (1967) A new genus and six new species of Entocytherid Ostracods (Ostracoda , Entocytheridae) Proc. U.S. natn. Mus.(Nat) 119, 1-12.
Hobbs H. H JR and Hobbs H. H. III. (1970) New Entocytherid Ostracods with a key to the genera of subfamily Entocytherinae. Smithson. Contrib. zool. 47, 1-19.
Benson R. H and H.C. MacDonald. (1963) Post-glacial (Holocene) Ostracods from Lake Erie. Univ. Kanas Paleontol. Contrib. Artic.4, 1-26.
Delorme L. D. (1969) Ostracods as Quaternary paleoecological indicators. Can. J. Earth Sci..6, 1471-1476.
Delorme L. D. (1971a) Paleoecological determinations using Pleistocene freshwater Ostracods. Bull. Centre. Rech. Pau.5, 341-347.
Delorme L. D. (1971b) Paleocology of Holocene sediments from Manitoba using

freshwater Ostracodes. Geol. Assoc. Can. Spec. Pap. 9, 301-304.

Szczechura J. (1971) Seasonal changes in a reared freshwater species of Cyprinotus (Hetrocypris) incongruens and their variability in fossil Ostracods. Bull. Centre Rech. Pau. 5, 191-205.

Stout L. N. (1975) Polytypic species and Hybridisation in Quarternary Ostracods of North America. Paleogeogr. Paleoclimatol. Paleoecol. 17, 257-266.

Moore R. C (1961) Treatise on Invertebrate Paleontology, Part Q Arthropoda. 3. Crustacean :Ostracoda, Geol. Soc. America and University of Kanas press. 442.

Howe H. V. (1969) Homonymy and other man created afflictions of Recent Ostracoda. In Neale, J. W. (ed) The Taxonomy, Morphology and Ecology of Recent Ostracoda. Oliver and Boyd. Edin. 533pp.

Martin, J. W. and G. E. Davis. (2001) An updated classification of the recent Crustacea. Natural History Museum of Los Angeles, Science series. 39, 1-124.

Horne, D. J., A. Cahen and Martens. (2002) Taxonomy, morphology and biology of quaternary and living Ostracoda, pp. 5-36. In: Holmes J.A. and A. R. Chivas (eds). The Ostracoda Applications in Quaternary Research. *Geophysics Monograph*-131.

Karanovic, I. (2012) Recent freshwater Ostracods of the World- Crustacea, Ostracoda, Podocopida. Published by Springer, London.1-608.

Meisch C., Smith R. J. and Martens K. (2019) A subjective global checklist of the extant non-marine Ostracoda (Crustacea). *European Journal of Taxonomy* 492, 1–135. https://doi.org/10.5852/ejt.2019/492.

Karuthapandi M., Rao, D. V., and Xavier innocent, B.(2014) Freshwater Ostracoda (Crustacea) of India- A checklist. Journal of Threatened Taxa. 6(12), 6576-6581.

Karuthapandi M. and Rao D. V. (2017) CRUSTACEA: OSTRACODA (SEED SHRIMPS). In: Kailash Chandra, K. C. Gopi, D. V. Rao, K. Valarmathi, J. R. B. Alfred (Eds). *Current status of freshwater faunal diversity in India*. Zoological Survey of India, Kolkata. Pp. 253-271.

Martens K., I. Schon C. Meisch and D. J. Horne. (2008) Global diversity of Ostracods (Ostracoda, Crustacea) in freshwater. *Hydrobiologia*. 595, 185-193; http://dx.doi.org/10.1007/s10750-007-9245-4

Baird W. (1859) Descriptions of some new Entomostraca from Nagpur, collected by Rev, S. Hislop. Proc. Zool. Soc. Lond., 398, 231-234.

Klie W. (1927) Zurkenutnis der Mikrofauna British Indian. Records of the Indian Museum. 1, 157-165.

Arora G. L. (1931) Fauna of Lahore 2 Entomostraca (Water fleas) of Lahore. Bull. Dep Zool. Punjab University. 1, 62-100.

Hartmann G. (1964). Asiatische Ostracoden Systamatische und Zoogeographische untersuchungen. Internationalae Revue der Gesamten Hydrobiologie und Systematische Beihefte 3, 1-155.

Deb M. (1972) Two new species of *Stenocypris* Sars, 1889, J. zool. Soc. India.1, 91-95.

Deb M. (1973) First record of the genus *Sclerocypris*, Sars 1924(Crustacea: Ostracoda) from India with description of two new species. J. zool. Soc. India. 25, 47-52.

Deb M. (1978) Notes on the collection of Ostracods from Delhi. Rec. zool. Soc. Surv. India. 67, 309-313.

Victor R and R.G. Michael. (1975). Nine new species of freshwater Ostracods from Madurai area in southern India. J. Nat. Hist. 9, 361-376.

Battish S. K (1978) A new genus and new species of *Cypridid* Ostracod from India, with notes on its biology. Zoological J. Linn. Soc., 64, 283-292.

Battish S. K. (1981) Freshwater Ostracods of the subfamily Cyprinotinae from Punjab, India with description of eight new species. Nat. Hist. Soc. 15, 645-669.

Victor R and C. H. Fernando. (1979) The freshwater Ostracods. (Crustacea: Ostracoda). Rec. Zool. Surv. India. 74(2), 147-242.

Thilak Jayasree., K. S. Rao., K. A. Singh and K. Sunil (1994) Observations on the Ostracoda fauna of central India with special reference to the Western Narmada basin. Journal of Aquatic Biology and Fisheries. 1(2), 41-50.

Venkataraman K. and Krishnamoorthy (1998) Crustacea- Faunal Diversity in India. Published by *ENVIS* centre. Zoological Survey of India, Culcutta, 134-144.

Venkataraman K. (1999) Three species of freshwater Ostracoda (Crustacea) from Tamil Nadu. Rec. Zool. Surv. India. 97(3), 91-96.

Patil S. G and Talmalae S. S. (2005) A checklist of freshwater Ostracods (Ostracoda: Crustacea) of Maharashtra, India. Zoos' Print Journal, 20(5), 1872-1873.

Harshey D. K. and Thilak J. (2011) Freshwater Ostracods (Arthropoda: Crustacea). In: Fauna of Madhya Pradesh (including Chhattisgarh), State Fauna Series, 15 (Part-3), 31- 44, Zoological Survey of India, Kolkata.

Edmondson W. T. (1959) Freshwater Biology (Ed. Ward & Wipple) 2nd ed.. John Wiley and Sons, Inc., New York: 657-734.

Karanovic I. (2012) Recent freshwater Ostracods of the World- Crustacea, Ostracoda, Podocopida. Published by Springer, London.1-608.

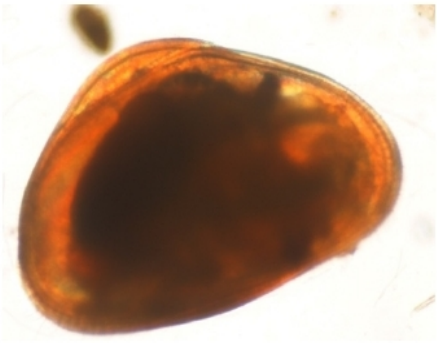
International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
***Available Online* at www.ijgsr.com**

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

Some photographs of Ostracods recorded from Villupuram, Trichy, Thiruvannamalai, Nilgiri & Chennai districts of Tamil Nadu.

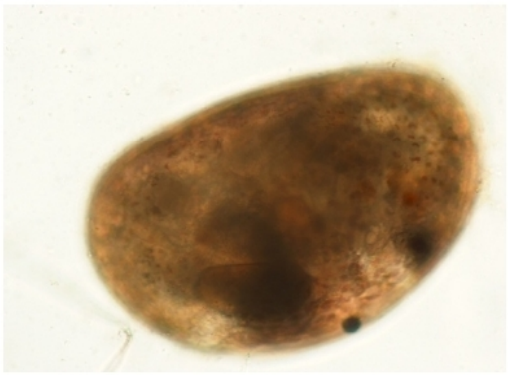
PLATE-1

Pseudostrandesia calapanensi Tressler, 1937



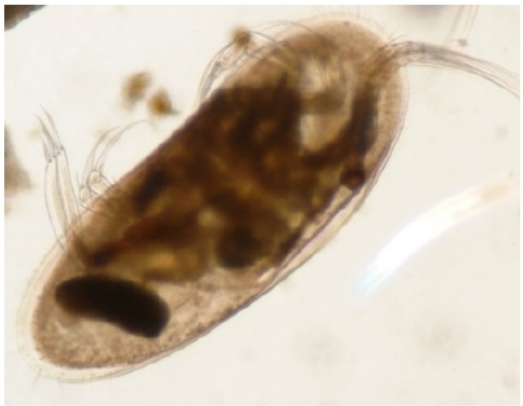
Cyprinotus cingalensis Brady, 1886

Bradellastrandesia parva Hartmann, 1964



Cyris granulata Daday, 1898

Strandesia setosa Hartmann, 1964



Chrissia halyi (Ferguson, 1969)

International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
***Available Online* at www.ijgsr.com**

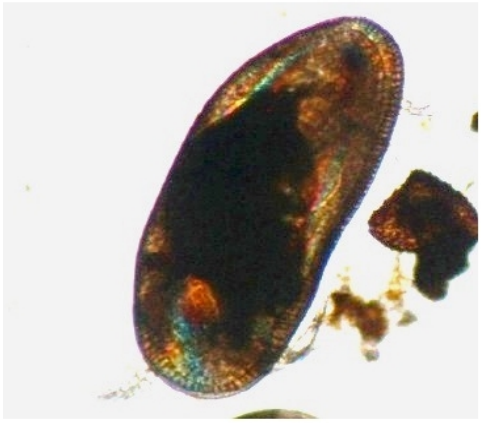
ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

PLATE-2

Strandesia labiata Hartmann, 1964

Cypris dravidensis, Victor & Fernando, 1975

Plesiocypridopsis dispar Hartmann, 1964



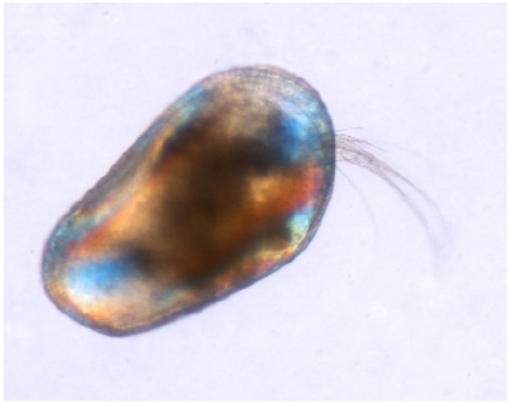
Stenocypris distincta Victor & Fernando, 1978

Centrocypris matthai (Arora, 1931)

International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
Available Online at www.ijgsr.com

ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

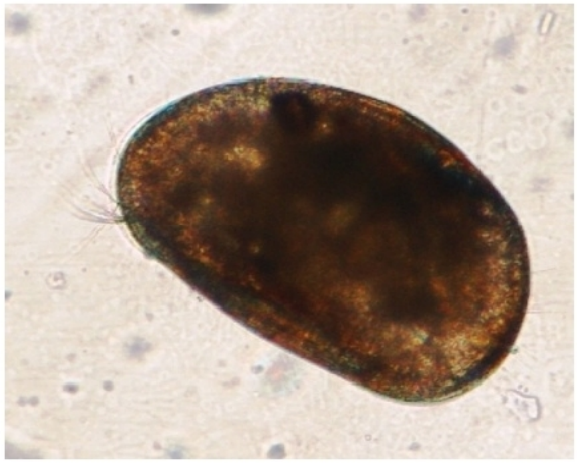
PLATE-3



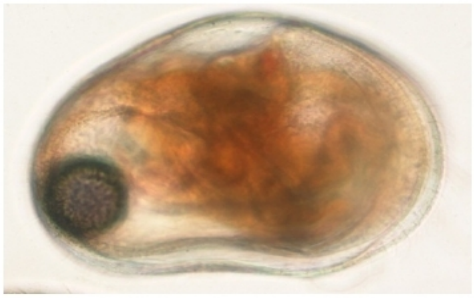
Hemicypris anomala (Klie, 1938)

Cypridopsis madurensis Victor& Michael, 1975

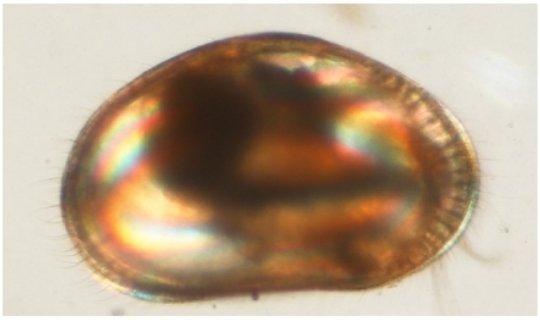
Chrissia humilis (Klie, 1932)



Cypris protubera Victor & Fernando, 1975



Cypretta alagarkoilensis Victor & Michael, 1975



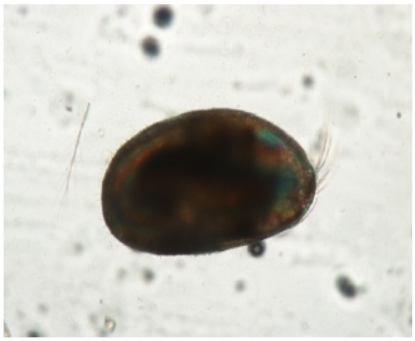
Cypretta fontinalis Hartmann, 1964

International Journal of Global Science Research
Vol. 7, Issue. 2, October 2020, pp. 1353-1375
Available Online at www.ijgsr.com

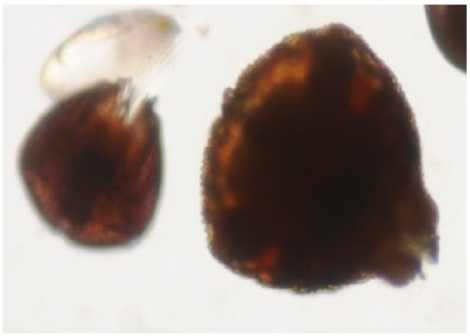
ISSN: 2348-8344 (Online)
DOI: 10.26540/ijgsr.v7.i2.2020.158

PLATE-4

Heterocypris incongruens (Ramdhor, 1808)

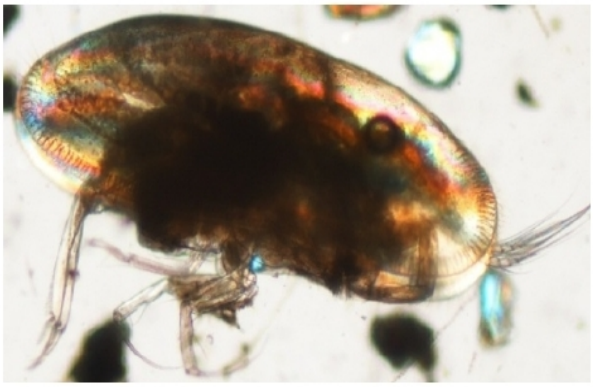


Heterocypris nudus Victor & Michael, 1975



Oncocypris voeltzkowi G. W. Muller, 1898

Hemicypris falcatus Victor & Fernando, 1976



Stenocypris hislopi(Ferguson, 1969)

Stenocypris major (Baird, 1859)