

1. PERSONAL DETAILS

- a. Name : **Dr. A . S. MAHESWARI**
- b. Address (Residential) : Plot No: 3 – B, Visalatchi Avenue (East – Near Vadakku Street),
Kambarasambettai, Trichy 620101.
Tamil Nadu, India.
Mobile : 9789762086, 9080450144
[Mail ID : asmaheswari@gmail.com](mailto:asmaheswari@gmail.com)
- c. Designation : **Assistant Professor (Senior) & Head**
- d. Department : **Zoology**
- e. Date of Birth : **20.06.1978**
- f. Area of Specialization : **Zoology** – Wetland Ornithology, Molluscan Biology
Conservation Biology, Habitat Ecology,
Environmental Toxicology, Microbiology



2. ACADEMIC QUALIFICATIONS

Exam Passed	Board/University	Subjects	Year	Division/ Grade Merit etc.
High School	State Board	General	1993	70.20%
Higher Secondary or Pre-Degree	State Board	Pure Science	1995	70.25%
Bachelor's Degree (s)	Bharathidasan University. Trichy	Zoology	1998	First class 68%
Master's Degree (s)	Bharathidasan University. Trichy	Wildlife Biology	2000	Distinction 81% (Silver Medallist)
Research Degree (s) Ph. D.	Bharathidasan University. Trichy	Population and Foraging Ecology of Asian Openbill Storks.	2006	Commended

3. RESEARCH EXPERIENCE & TRAINING :

Research Experience : **19 Years**

Research Stage	Title of work/Theses	University where the work was carried out
M.Sc.	Studies on the patch utilization patterns of Egrets <i>Egretta garzetta</i> and <i>Bubulcus ibis</i> at Cauvery delta during 1999 – 2000. SILVER MEDAL	(A.V.C.College) Bharathidasan University. Trichy
Ph.D.	Population and Foraging Ecology of Asian Openbill Storks <i>Anastomus oscitans</i> (Boddaert) in Veeranam Lake, Cuddalore District, Tamilnadu, Southern India. <u>Special Stipend Received</u> Received Stipend from UGC for full time Ph.D., for three Years (Rs – 2000/month).	(A.V.C.College) Bharathidasan University. Trichy
<p>4. INTERNATIONAL PUBLICATIONS (last 5 years)</p> <p>Two research papers were presented at International Congresses during 2015 at Serbia (Europe) and in Japan during 2016</p>		
<p>1. Maheswari. A S and Thiyagesan, K 2012. Distribution of phytoplankton community in Veeranam lake, Tamil nadu – An indicator of wetland ecosystem. <i>J. Ecotoxicol. Environ. Monit.</i> 22(6) 521-528.</p>		
<p>2. Maheswari. A S and Thiyagesan, K 2013. Habitat assessment on floral and faunal community of Veeranam wetland ecosystem towards conservation. <i>J. Ecotoxicol. Environ. Monit.</i> 23(1) 1-11.</p>		
<p>3. A.S.Maheswari and K.Thiyagesan. 2013. Zooplankton community structure in relation to physical chemical factors of Veeranam lake water. <i>J. Exp. Zool.</i> India. Vol. 16, No. 2, pp. 419 –427.</p>		
<p>4. A.S.Maheswari and K.Thiyagesan. 2013. Influence of molluscan prey availability on food preference by Asian Openbill Stork (<i>Anastomus oscitans</i> (Boddaert) in Veeranam lake, Cuddalore</p>		

District, Tamil Nadu, Southern India. <i>J. Sci. Trans. Environ. Technov.</i> 2013, 6(4): 210 - 214.		
5. A. S. Maheswari and 2013. Macro nutrients (N, P and K) profile of the bottom sediments of Koothaippar wetlands in relation to sediment pH, Electrical Conductivity, atmospheric and water temperature. Biochemical and cell Archives.		
6. A. S. Maheswari. 2017. Counseling as a tool for conflict management among science undergraduates. Shanlax International Journal of Arts, Science and Humanities. 111-113.		
7. A. S. Maheswari and P. Anitha. 2017. Impact of feed quality on silk fibre. Shanlax International Journal of Arts, Science and Humanities. 189-191.		
8. Ranjani, R and Maheswari, A.S. 2017. Seasonal variations of Molluscan forms in relation to lake water characteristics in Koothaippar lake ecosystem, Tiruchirappalli District, Tamil Nadu, South India. <i>J. Sci. Trans. Environ. Technov.</i> , 10(3):109 – 112.		
9. Ranjani, R and Maheswari, A.S. 2017. Saptio-temporal variations and bottom sedimental influence on the diversity of water birds in Koothaippar wetlands, Tiruchirappalli District, Tamil Nadu, South India. <i>Int. J. Current Res.</i> 9(03): 48299-48302.		
10. Ranjani, R and Maheswari, A.S. 2017. Seasonal variations in the bottom sedimental macronutrients and its impact on the bio-chemical profile of freshwater molluscan <i>Pila globosa</i> . <i>Int. Res. J. Biol. Sci.</i> 6(5): 10-14.		
	<p>1. Foraging Ecology of Asian Openbill Stork at Veeranam lake, South India.</p> <p>2. Global Challenges in Higher Education – Indian Scenario.</p> <p>3. Influence of Molluscan prey availability on the population fluctuations of Asian Openbill Stork, in Veeranam lake, Cuddalore district, Tamil Nadu, Southern India.</p> <p>4. Studies on the distribution of Phytoplankton Community in Veeranam lake, Cuddalore District, Tamil Nadu, South India.</p> <p>5. Patch Utilization Patterns of Egrets at Cauvery</p>	<p>24th International Ornithological Congress held at Hamburg, Germany.</p> <p>Seethalaksmi Ramaswami College, Tiruchirappalli.</p> <p>Christ University, Bangalore.</p> <p>Poombuhar Arts and Science College, Melaiyur.</p> <p>Published as a chapter in</p>

	<p>Delta.</p> <p>6. Role of Microbes in Nitrogen Cycle</p> <p>7. Role of Wetlands in water bird conservation</p> <p>8. Does Molluscan prey size influences the food preference in Asian Openbill Stork?</p> <p>9. Assessing the functional performance of Koothaippar wetland ecosystem through waterbird population and diversification studies.</p> <p>10. Waterbirds diversity in Koothaippar lake ecosystem, Trichy District, Tamilnadu, Southern India.</p> <p>11. National Conference on Perspectives and Prospects in Aquatic Research</p> <p>11. Quality initiatives and benchmarking in Higher Education Institutions – A changing landscape of Higher Education and Catalyst for enriching the learning</p>	<p>the Book “ Status of Indian Birds and their Conservation.</p> <p>In the Proceedings of the International Seminar on Cosmo Chemistry.</p> <p>In the Proceedings of the National Seminar on Recent Advances in Life Sciences, RAIL -2011, H.H.The Rajah’s College, Pudukkottai.</p> <p>Presented a poster in the UGC sponsored National Seminar on “Perspectives in Ethology” in Stella Maris College, Chennai on 01.12.2012.</p> <p>Presented a paper in the National conference at Nehru Memorial College, Puthanampatti, Trichy on 07.03.2013.</p> <p>Presented a paper in the International conference on frontiers in Life Sciences-2016 at St. Joseph College, Trichy</p> <p>Presented a paper Kongunadu Arts and Science College, Coimbatore 16.02.2016</p> <p>Presented a paper 3 & 4th Sep 2015 Surana College, Bangalore</p>
--	---	--

	<p>11 . Socio - Economic Benefits of Koothaippar Wetlands</p> <p>11. Wetland Protection – In The Light of Biodiversity Conservation</p> <p>12. Biodiversity conservation for future generation</p>	<p>International Conference on Conservation of Natural Resources at Nehru Memorial College, Puthanampatti on 17.09.2017</p> <p>Presented a paper in the International Conference on Converging Biotechnological Innovations in Environmental Welfare at K.S.G. College of Arts and Science, Coimbatore on 19.09.2016</p> <p>Presented a paper in Biodiversity Conservation – Achieving UN sustainable Goals at National Olympics Memorial Youth Centre, Tokyo, Japan on 06th October to 10th October 2016</p>
11. TRAININGS		
	<p>1. Training on Elephant Census.</p> <p>2. Training Programme on Waterbirds Census</p> <p>3. Bird and Animal Census</p> <p>4. Basic training on Wildlife Photography</p> <p>5. Taxidermy and Museum Techniques</p> <p>6. Hands on training on Immuno and Electrophoretic</p>	<p>Dharmapuri and Hosur Forest Divisions, Dharmapuri. Point Calimere Wildlife Sanctuary.</p> <p>Point Calimere Wildlife Sanctuary.</p> <p>A.V.C.College, Mayiladuthurai.</p> <p>A.V.C.College, Mayiladuthurai.</p> <p>Two day DBT Sponsored Workshop, Seethalakshmi</p>

	Techniques	Ramaswami College,Trichy.
	7. Training on Personality Development Skills	Easma Technologies, Karur.
	8.Reforms in higher education	IQAC, Seethalakshmi Ramaswami College,Trichy.
	9.Training on Bee-keeping	Seethalakshmi Ramaswami College,Trichy. ICAR, Delhi & TNAU Collaborative workshop

6. Awards

1. **As Co-Chair** in the International seminar (III World Biodiversity Congress) held at Serbia (Europe) during October, 2015.

2. **Member** in the **international deliberations on Climate Change – Achieving UN Sustainable Goals – held at the DIET Parliament House, TOKYO, JAPAN during October 2016.**

3. **As Lead Paper Presenter** in the National Seminar **DWILES – 2017 - Held at Christ University Bangalore** during January 2017.

4. **As Chair** in the National Seminar **DWILES – 2017 - Held at Christ University Bangalore** during January 2017.

5. **Best poster presentation award (First Prize – cash award)** in the national conference on Perspectives in Ethology “Size as visual cues of Communication - Sluggish Vs Strategic” Does Molluscan prey size matters in deciding diet table of Asian Openbill Stork?

6. **Best poster presentation award (First Prize – shield)** in the National Seminar on Biodiversity informatics - Monitoring avian assemblages in Koothaippar wetlands of Trichy region – a pragmatic approach to the conservation of waterbirds and wetlands.

7. Conferences /Seminars/ Workshops/ Organized with grant support

- International Conference on “**Conservation of Biodiversity**” with the support of Tamilnadu State Forest Dept. & OISCA International, Japan.
- As Co - Organizing Secretary for the International Conference on “**Conservation of Natural Resources**” at Nehru Memorial College, Puthanampatti, Trichy with the financial support of Tamilnadu State Forest Dept. & OISCA International, Japan.
- Hands-on Workshop on “**Bee-keeping**” in collaboration with ICAR, Delhi & TNAU, Coimbatore.
- **National Science Academies Lecture Series Workshop on “Thrust Areas in Biological Sciences – BIOTAB – 2017”** for two days with the financial support of all three Science Academies, India.
- UGC Sponsored One Day Seminars on various **aspects of Biodiversity and Environmental Protection** & Special Lectures on “**Thrust Areas of Zoology**” with financial support.

8. Positions Held

- **Vice – President** – Zoology Association
- **Secretary** – Staff Club
- **Vice President** – College Student’s Union

9. Extra Curricular Activities :

Member - Curriculum Committee

Member - Board of Studies

Member – IQAC Working Committee

Member – Souvenir Committee

Member – NAAC Committee

Member – Exam Committee

Member - Students Welfare Committee

Member – College Advisory Committee

Member – Student’s Welfare Committee

Member - Discipline Committee

Member – College Convocation Committee

Member – Exnora Club

10. As Expert Member in Academic Bodies

External Examiner – M.Sc., M.phil., Ph.D., - for Colleges and University

Examiner – Central valuation – Bharatthidasan University and affiliated Colleges

11. Membership in Professional/Academic Organizations

- Life Member – **Indian Science Congress**
- Member – **OISCA - International, Japan.**

12. PARTICIPATION IN CORPORATE LIFE

- Contribution of one day salary towards Tsunami and flood relief
- As **Presiding Officer** in Tamil Nadu General Assembly Election 2016.

13. RESEARCH PROJECTS CARRIED OUT/ ONGOING – 19 Years in Conservation Biology

Currently Guiding 2 Ph.D. Students in field of

- **Freshwater Molluscan Taxonomy & Conservation Biology &**
- **Seri-biotechnology**

Title of the Project	Name of the funding Agency	Duration	Remarks	Status
Studies on the habitat and seasonal influence on the distribution of waterbirds in Tiruchirappalli District, Tamilnadu.	UGC	18 Months	Principal Investigator (Rs: 1,35,000/-)	Completed
Assessment of Molluscan Prey Population and its Impact on the distribution of Asian Openbill Stork in Koothaippar Wetland Ecosystem, Trichy.	UGC	4 Years 2013 - 2017	Principal Investigator (Rs: 12,03,300/-)	Completed

SPECIAL ACHIEVEMENTS IN RESEARCH FIELD :

- **Served as CONSULTANT** – Three Member Team in The Planning Board Of Osudu Lake Conservation, Planning And Proposal Building, Forest Department, Pondicherry.
- **Appointed as MEMBER (team of two)** for monitoring the pollution of river Cauvery, by the Cauvery river basin project team.

14. SEMINARS, CONFERENCES, SYMPOSIA WORKSHOPS - ATTENDED

Name of the Seminar/ conference/ Symposia workshop, etc.	Name of the Sponsoring Agency	Place and Date
“Orientation Programme on various teaching methodologies and practices using ICT”	Seethalakshmi Ramaswami College, Tiruchirapalli.	Seethalakshmi Ramaswami College, Tiruchirapalli. 29 th Feb & 1 st Mar 2008.
National Level Seminar on “Challenges of Quality Sustenance and Enhancement in Arts and Science Education”	IQAC – Paper presented	Seethalakshmi Ramaswami College, Tiruchirapalli. 11 th & 12 th August, 2009.
National Workshop on Students participation in quality enhancement and sustenance.	IQAC	Auxilium College, Vellore. 11 December 2008.
State seminar cum workshop on “Environmental stewardship in recycling of resources, waste minimization and management”	UBCHEA, TNSCST, UGC, NCSTC.	Lady Doak College, Madurai, 25 & 26 th February 2009.
Orientation Programme on Various Teaching Modules and Practices using ICT”	UGC	Academic Staff College, Bharathidasan University, Trichy.2 - 29 th May 2009.
Workshop on Life Science	EASMA Tech, Karur	Seethalakshmi Ramaswami College, Tiruchirapalli.

Tech.		19 August, 2009.
National Seminar on Advances in Molecular Biosciences	Bishop Heber College, Tiruchy	Bishop Heber College, Tiruchy. 25 November, 2009.
National Seminar on Invertebrate Zoology Meet	Christ University, Bangalore.	4 th & 5 th December, 2009. Christ University, Bangalore.
Seminar on Poultry Farming	Seethalakshmi Ramaswami College, Tiruchirapalli.	26.09. 2009. Seethalakshmi Ramaswami College, Tiruchirapalli.
Nanobiology - New oppurtunities	Seethalakshmi Ramaswami College, Tiruchirapalli.	15 December, 2009.
Seminar on Biowaste Management	Seethalakshmi Ramaswami College, Tiruchirapalli.	4 February 2010.
DBT sponsored Workshop on Electrophoretic and Immuno electrophoretic Techniques	Department of Zoology Seethalakshmi Ramaswami College, Tiruchirapalli.	26 – 28, September, 2011
International Seminar On Cosmo Chemistry – Paper presented.	UGC	14.09.2011 Seethalakshmi Ramaswami College, Tiruchirapalli.
International Seminar On Indian Ornithology - 2011	UGC, DST, MoEF	19.11.2011 – 23.11.2011 Salim Ali Centre for Ornithology and Natural History, Coimbatore, India
National seminar On Recent Advances in Life Sciences – RAIL 2011. – Paper presented.	UGC	28 – 29. 12.2011
International Conference on Conservation of Biodiversity	OISCA	16.09.2016 Seethalakshmi Ramaswami College, Tiruchirappalli
Science Academies' Lecture Workshop on Current	INSA	26 th to 28 th September 2016 Cauvery College for Women,

Developments in Biology, Biotechnology and Evolution		Tiruchirappalli
National Conference on Better Environment and Better Future	-	2 nd August 2016 Holy Cross College (Autonomous), Tiruchirappalli
National Seminar on Conflict Management for youth development	UGC	22nd & 23rd December 2016 Seethalakshmi Ramaswami College (Autonomous), Tiruchirappalli
National Seminar on Innovative Textiles	UGC	28th January 2017 Seethalakshmi Ramaswami College (Autonomous), Tiruchirappalli
International workshop on Biochemical & Bioinformatics techniques	-	5 th September 2017 Shrimati Indira Gandhi College, Tiruchirappalli

15. TEACHING EXPERIENCE

Total Teaching Experience : 11 Years

a) Under-graduate : 11 Years

b) Post-graduate : 1 Year

Courses Taught	Name of the University/college/ Institution	Duration
U.G	Zoology – Poombuhar Arts and Science College, Melaiyur. Zoology – Seethalakshmi Ramaswami College	1 year (Management) From 21.01.08 - to - Till date.
P.G	Zoology – Poobuhar Arts and Science College, Melaiyur.	1 year (Management)

5. SUMMARY

- I. **List of Molluscan forms in the study area (RI & RII)**
 - Totally 8 species of molluscan forms including gastropods and bivalves were recorded from both the regions.
 - Among the 8 species, gastropod *Pilaglobosa* and bivalve *Lamellidens marginalis* are the two species which are predominantly present in the study area.

- II. **Spatio – temporal variations in the availability of Molluscan prey**
 - Variations in the distribution of different molluscan forms were recorded in both the regions of the lake.
 - Significant variations were observed both in terms of highest individual number and highest number of species of molluscan forms in two different regions of the lake across different seasons.
 - Totally 8 species of molluscan forms including gastropods and bivalves were recorded from both the regions and among the 8 species, gastropod *Pilaglobosa* and bivalve *Lamellidens marginalis* are the two species which are predominantly present in the study area (list -1).
 - Seasonal variations in the distribution of different molluscan species populations were recorded in both the regions of the lake during the study period and are represented in **Fig 2 –21**.
 - Significant variations were observed both in terms of highest individual number and highest number of species of molluscan forms in two different regions of the lake across different seasons.
 - The distribution of different molluscan forms in terms of highest number of species and highest number in a species during Pre Monsoon 2013, monsoon, post monsoon & summer 2014 were **high in Region I** when compared to Region II.
 - **But**, on the contrary, the **preference of the region** by the bird Asian Openbill Stork seems to be **Region II**.

- III. **Biochemical analysis on selected Molluscan forms**
 - The results of the present study revealed that the protein composition were high (20.13%) followed by carbohydrate (9.16%), lipid (2.42%), moisture (55.91%) and ash (12.38%).

- The result also indicates the significant compositional variations among the parameters and across the seasons.
- The total essential amino acids were found to be as **57.43 %** and non-essential amino acids were **42.25 %**.
- Among the essential amino acids **methionine** were found high as 15.6 % on dry matter basis in gastropod tissue.
- The non-essential amino acids **alanine** was found maximum as 12.28 % on dry matter basis.
- In *Pilaglobosa* 10 different fatty acids were found in body tissue; they are **five** saturated fatty acids (SFA), **two** monounsaturated fatty acids (MUFA) and **three** polyunsaturated fatty acids (PUFA).
- Among the C16:0, C18:1 and C20:4 were the major acids. The percentage availability of SFA, MUFA and PUFA content was 43.82, 25.9 & 26.46% in *pila sp.*
- The figures (1,2) showed analysis of the amino acids from *pilaglobosa* more or less same number of peaks, lying within the same range of values of the commercial amino acids used as a standard.
- The figures (3,4) showed analysis of the fatty acids from *pilaglobosa* more or less same number of peaks, lying within the same range of values of the commercial fatty acids used as a standard.

IV. Molluscan Parasites

- Two species of molluscan forms namely *Bellamyabengalensis* and *Indoplanorbissexustus* were found to be infected with Trematode - cercariae parasite and in both the molluscan forms, infection is caused by the same type of parasite – Clinostomoid.

V. Water and Bottom sediment analysis

- Among the two regions of the study area, highest mean values were recorded for soil pH, nitrogen and phosphorus for region I while Region II recorded highest for soil electrical conductivity and Potassium.
- Besides quantifying the macronutrient availability of bottom sediments, one-way ANOVA also tested to evaluate the significant influence of these physico – chemical parameters and macronutrients distribution in the bottom sediment samples on the distribution of water birds in the study area during the study period.

- Except bottom soil Potassium, all other factors viz., Nitrogen, Phosphorus, Iron, Manganese, Zinc, Copper, soil Electrical Conductivity and soil pH, influenced significantly the distribution of water birds and the distribution of freshwater molluscan species in the lake.

VI. Waterbird population studies

- Totally in both the regions 46 species of water bird species belonging to five different ecological groups were recorded.
- Significant seasonal visitations in both the regions also show variations. Variations were also noted with regard to the distribution of birds in two different regions. Both the regions show attraction towards large waders, followed by swimming birds, aerial foragers and diving birds.
- Distribution of (as highest number recorded in a single count) Asian Openbill Stork in the two regions of the lake show significant variations with regard to their visit during a particular season of the year and it is presented in figs.36 - 39.
- The result reveals that the preference of the lake seems to be highest during the season post monsoon followed by summer.
- This may be due to the distribution and availability of different prey species.
- Among the 46 species recorded more than 15 species were migratory birds and they also seem to be showing high preference to this wetland area.

Plankton Species

- Totally about 42 species of Phytoplankton and 37 species of Zooplankton were recorded during the study period.