Activity Report - Kerala

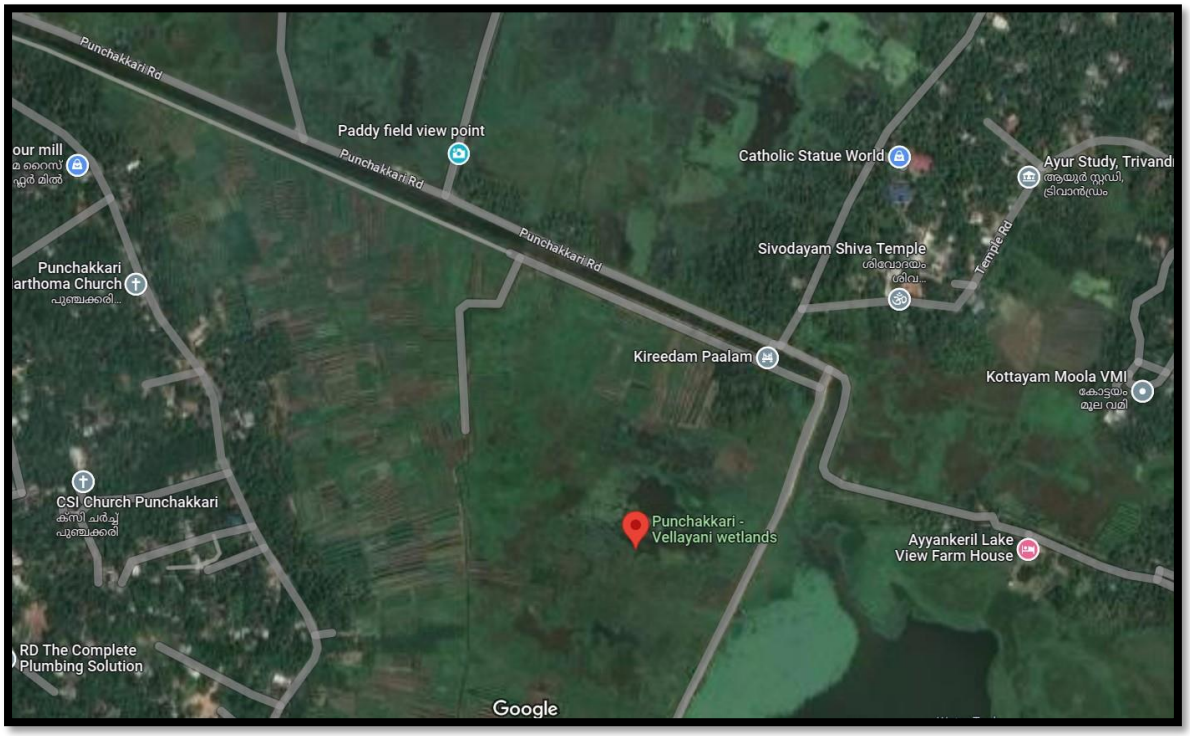
The Dragonfly Festival in Kerala was conducted from the month of August to December 2022. Society for Odonate Studies (SOS) was a National Partner and coordinated the activity in Kerala. The components of the festival included – Wetland Biomonitoring and Odonate Training Workshops for frontline staff of Protected Areas in Kerala. The team also helped with making protocols for the national BioBlitz event.

1. Wetland Biomonitoring

The wetland biomonitoring was conducted in four wetlands in Kerala as part of the Dragonfly Festival 2022-23. Vellayani Lake, Bharathapuzha River, Kole Wetlands, and Kattampally Wetlands were the wetlands covered. The biomonitoring was carried out by Student Volunteers from colleges close to the wetlands and they were guided by an expert from the Society for Odonate Studies, Official Partner of Dragonfly Festival 2022. For the smooth conduct of the biomonitoring, WhatsApp groups were created for each wetland and kept active throughout the survey. Reminders were sent and also information on BioBlitz and Online Expert talks were shared in the group.

1.1 Vellayani Lake

Vellayani Lake is situated in the Thiruvananthapuram District and is one of the largest wetlands present here. It is spread over an area of 7.5 acres and is a hotspot for birds and other flora and fauna. Part of the lake is used for agriculture, especially paddy and vegetables. Local residents are also involved in minor fishing activities. The transect chosen for the biomonitoring is along the Punchakkari Road. The weather was generally sunny. The presence of shore vegetation and reeds and grasses were noted, but there was no canopy cover. The water was observed to be turbid in most areas.



Location Map

The biomonitoring was conducted by ten Volunteers from two colleges. Gopikrishna R.A., Shinitha K., Arya S. Nair, Akhila G., Anaida Saji from Government Women's College and Remya, Parvathy Bijukumar, Aditi, Anjali S., Ambili and Sajitha A.S. from All Saint's College, Thiruvananthapuram. The experts leading the biomonitoring were Dr. Sujith V.G., Harikrishnan S., and Govind Girija. They conducted the biomonitoring on 28th August, 18th September, 25th September, 9th October and 23rd October.

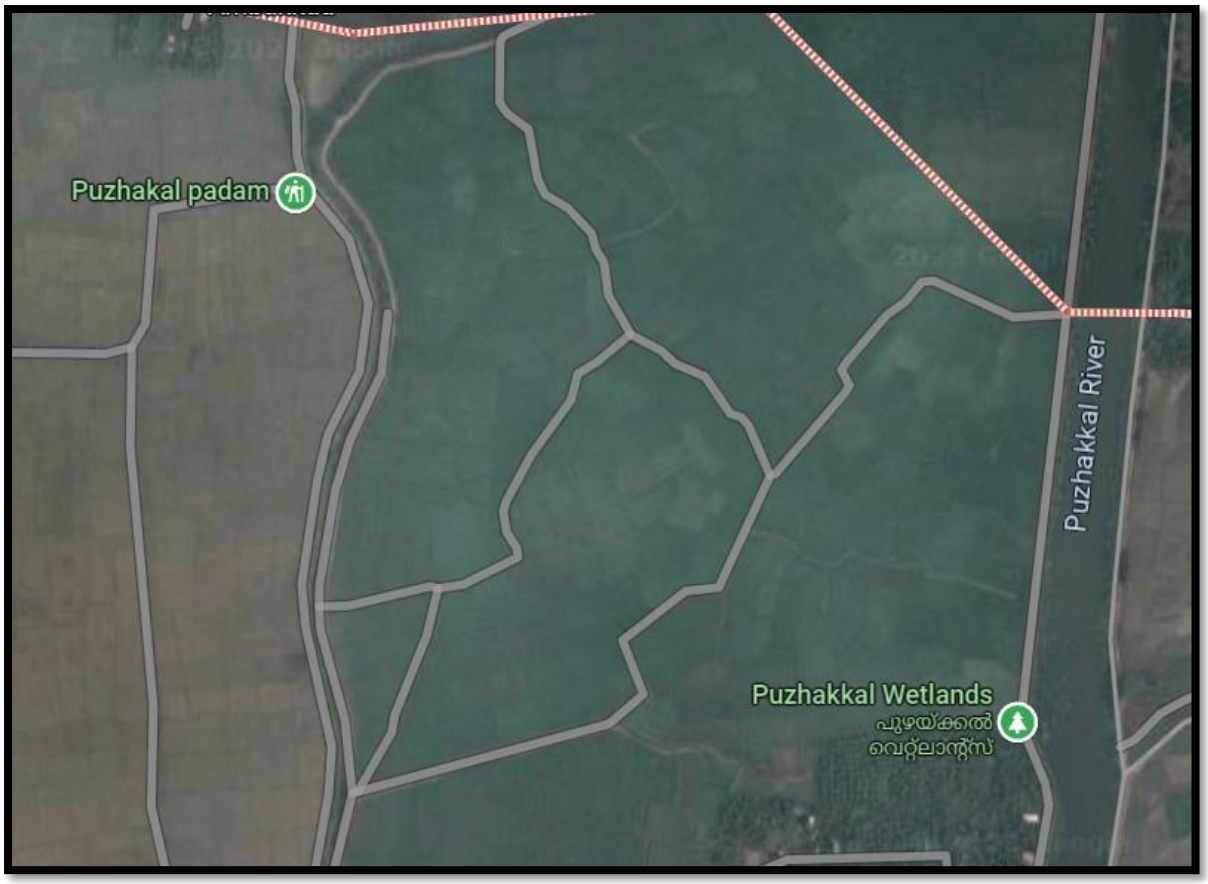
A total of twenty species were observed from here out of which 17 were Dragonflies and 3 were Damselflies. *Brachythemis contaminata* was the species with the most count (451) indicating that the water might be slightly contaminated. *Rhyothemis variegata* and *Pantala flavescens* were also seen in abundance during the survey. Egg laying behaviour was observed in one species, *Rhodothemis rufa* and mating behaviour was observed in five species - Rhodothemis rufa, *Urothemis signata, Rhyothemis variegate, Hydrobasileus croceus* and *Pseudagrion microceaphalum.* A total of 1283 individuals were counted during the survey.

Sl. No.	Species	Count
Dragonfly		
1	*Brachythemis contaminata*	451
2	*Rhyothemis variegata*	176
3	*Pantala flavescens*	149
4	*Crocothemis servilia*	87
5	*Urothemis signata*	85
6	*Brachydiplax chalybea*	80
7	*Acisoma panorpoides*	47
8	*Rhodothemis rufa*	42
9	*Brachydiplax sobrina*	42
10	*Orthetrum sabina*	30
11	*Aethriamanta brevipennis*	23
12	*Hydrobasileus croceus*	17
13	Ictinogomphus rapax	12
14	*Diplacodes trivialis*	4
15	*Tholymis tillarga*	3
16	*Anax sp*	1
17	*Neurothemis tullia*	1
Damselfly		
18	*Pseudagrion microcephalum*	4
19	*Agriocnemis pygmaea*	3
20	*Ceriagrion coromandelianum*	26

Field Photos

1.2 Kole Wetlands

The Kole Wetlands cover an area of about 13,632 hectares spread over Thrissur district and Malappuram district. The area extends from Chalakudy River in South to Bharathapuzha River in the North, and to Ponnani Taluk. The area chosen for the biomonitoring was Puzhakkal area and it is a paddy field.

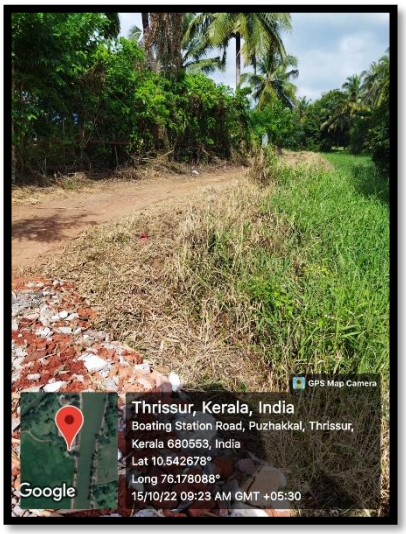


Location Map

The Volunteers who participated in the biomonitoring were Jaisankar, Soja, Kavya, Sreelekshmi and Athira of College of Forestry and Joby, Helna Nixon, Megha V.T., Aleesha Andrews, Arathy K.B. and Krishnakripa O.S. of St. Thomas College, Thrissur. The biomonitoring was conducted on 28th August, 26th September, 2nd and 23rd October, 12th and 27th November and 23rd December 2022. The expert who led the team was Abin M. Sunil and Vivek Chandran.

Reeds, grasses, and shore vegetation were present in the survey area but canopy cover was absent. The water was not turbid during the survey and the weather was sunny. Fourteen species of Odonates were observed and recorded here out of which 13 were Dragonflies and one species was a Damselfly. The most abundant species was the *Pantala flavescens (199 counts)* followed by *Acisoma panorpoides* and *Brachythemis contaminata.* Egg laying behaviour was observed in five species – *Acisoma panorpoides*, *Brachythemis contaminata, Brachydiplax chalybea, Aethriamanta brevipennis* and *Crocothemis servilia.* Mating behaviour was noticed in five species, *Acisoma panorpoides*, *Brachythemis contaminata, Brachydiplax chalybea, Aethriamanta brevipennis and Orthetrum sabina.* A total of 755 individuals were counted during the survey.

Sl. No.	Species	Count
Dragonfly		
1	*Pantala flavescens*	199
2	*Acisoma panorpoides*	192
3	*Brachythemis contaminata*	142
4	*Rhyothemis variegata*	59
5	*Crocothemis servilia*	47
6	*Rhodothemis rufa*	40
7	*Neurothemis tullia*	27
8	*Brachydiplax chalybea*	22
9	*Urothemis signata*	8
10	*Aethriamanta brevipennis*	8
11	*Ictinogomphus rapax*	5
12	*Orthetrum sabina*	3
13	*Pseudagrion microcephalum*	2
Damselfly		
14	*Ceriagrion coromandelianum*	1



Field Photos

1.3 Bharathapuzha River

Bharathapuzha River flows through three districts in Kerala – Palakkad, Thrissur, and Malappuram. The riverine ecosystem sustains a diversity of flora and fauna and is the major source of drinking water and irrigation. Ten Student Volunteers from NSS College, Ottappalam conducted the biomonitoring under the guidance of Muhammed Sheriff. The participating students were, Arundhathi G.K., Athira Ravindran, Bhanupriya P., Chaithanya P., Dhanya K.V., Krishnan P. Vijay, Nitya P., Gautham, Anjana P.G., and Raniya V.R. The Biomonitoring was conducted on 28th August, 21st and 29th September, 2nd and 24th October, 14th and 29th November and 4th and 18th December.

The transect chosen for the biomonitoring lies in Palakkad District. The weather was sunny and the water was clear. Reeds, Grasses, and shore vegetation were present, and no canopy cover in the chosen transect. About 40 species were observed from here out of which twenty-four species were Dragonflies and sixteen were Damselflies. The most abundant species was *Pantala flavescens* (926) followed by *Neurothemis tullia (703)*, *Orthetrum sabina (195), Agriocnemis pygmaea (161), Brachydiplax chalybea (112), Brachythemis contaminata (112)* and *Crocothemis servilia (107).*

Egg laying behaviour was observed in six species *Pseudagrion rubriceps, Orthetrum sabina, Copera marginipes, Acisoma panorpoides, Pantala flavescens* and *Crocothemis servilia.* Mating behaviour was observed in eleven species. The other activities observed were predation, tandem, congregation, roosting and territorial fighting. A total of 2968 individuals were counted.

Sl. No.	Species	Count
Dragonfly		
1	*Pantala flavescens*	926
2	*Neurothemis tullia*	703
3	*Orthetrum sabina*	195
4	*Brachydiplax chalybea*	112
5	*Brachythemis contaminata*	112
6	*Crocothemis servilia*	107
7	*Diplacodes trivialis*	63
8	*Acisoma panorpoides*	59
9	*Tholymis tillarga*	34
10	*Orthetrum chrysis*	20
11	*Orthetrum pruinosum*	19
12	*Potamarcha congener*	15
13	*Rhyothemis variegata*	15
14	*Rhodothemis rufa*	8
15	*Trithemis aurora*	5
16	*Trithemis pallidinervis*	5
17	*Neurothemis intermedia*	3
18	*Orthetrum luzonicum*	3
19	*Ictinogomphus rapax*	2
20	*Paragomphus lineatus*	2
21	*Bradinopyga geminata*	1
22	*Cyclogomphus sps.*	1
23	*Lestes elatus*	1
24	*Neurothemis fulvia*	1
Damselfly		
25	*Agriocnemis pygmaea*	161
26	*Ceriagrion coromandelianum*	96
27	*Agriocnemis pieris*	88

28	*Copera marginipes*	80
29	*Pseudagrion rubriceps*	33
30	*Ceriagrion cerinorubellum*	31
31	*Libellago indica*	21
32	*Aciagrion occidentale*	19
33	*Ischnura rubilio*	9
34	*Pseudagrion microcephalum*	6
35	Vestalis apicalis	5
36	*Vestalis gracilis*	2
37	*Ceriagrion olivaceum*	2
38	*Agriocnemis splendidissima*	1
39	*Pseudagrion decorum*	1
40	*Prodasineura verticalis*	1

Field Photos

1.4 Kattamapally Wetlands

Kattampally Wetland is a large swamp on the floodplains of the Valapattanam River in Kannur District of Kerala. The wetland was sunny and the water was turbid. Reeds, Grasses, Canopy, and shore vegetation were present in the biomonitoring site.

The team was led by Afsar Nayyakan. The Student Volunteers from Brennan College participated in the biomonitoring. The biomonitoring dates are 28th August, 21st and 29th September, 2nd and 24th October, 14th and 29th November and 12th December 2022.

There was a total count of twenty-six species out of which seventeen were Dragonflies and nine were Damselflies. The most abundant species was the *Aethriamanta brevipennis* followed by *Orthetrum Sabina,* and *Ceriagrion cerinorubellum.* Egg laying was observed in five species, *Brachythemis contaminate, Orthetrum sabina, Diplacodes trivialis, Crocothemis servilia,* and *Pantala flavescens.* Mating behaviour of five species, were also noted - *Orthetrum sabina, Diplacodes trivialis, Neurothemis tullia, Orthetrum Chrysis,* and *Pantala flavescens.* A total of 560 individuals were counted during the survey.

Sl. No.	Species	Count
	Dragonfly	
1	*Aethriamanta brevipennis*	133
2	*Orthetrum sabina*	92
3	*Pantala flavescens*	52
4	*Diplacodes trivialis*	41
5	*Neurothemis tullia*	39
6	*Crocothemis servilia*	36
7	*Brachythemis contaminata*	7
8	*Trithemis aurora*	6
9	*Orthetrum chrysis*	6
10	*Rhyothemis variegata*	5
11	*Ictinogomphus rapax*	4
12	*Lathrecista asiatica*	2
13	*Anax guttatas*	2
14	*Tholymis tillarga*	2
15	*Trithemis pallidinervis*	1
16	*Orthetrum pruinosum*	1
17	*Hydrobasileus croceus*	1
	Damselfly	
18	*Ceriagrion cerinorubellum*	68
19	*Pseudagrion microcephalum*	25
20	*Agriocnemis pygmaea*	20
21	*Ceriagrion chromothorax*	6
22	*Ischnura rubilio*	4
23	*Ischnura senegalensis*	3
24	*Mortonagrion varralli*	2
25	*Ceriagrion olivaceum*	1
26	*Lyriothmis acigastra*	1

2. Odonate Training Workshops for Protected Areas in Kerala

In 2022, as the COVID pandemic has significantly subsided, WWF-India, Kerala State Office envisaged more on-ground programs for the Dragonfly Festival. From the significant cooperation and participation in the Dragonfly Festival from the Kerala Forests and Wildlife Department in 2020, and to take the initiative forward. As the frontline staff are out in the field every day, they will be able to collect data consistently, know and understand them well, note changes in their habitats, and do the needed to protect them and this data on Odonates will be beneficial to ensure the conservation of these lesser known, but ecologically significant species in our Protected Areas. Hence, it was proposed to the Kerala Forests and Wildlife Department to conduct Odonate Training Workshops for the frontline staff of their Department.

As habitat specificity is the most important factor affecting the regional distribution of Dragonflies and Damselflies and therefore considering the diversity in the ecosystems and biodiversity across Kerala, we have selected seven unique representative locations for conducting the program:

1. Wayanad – High-altitude Dry Deciduous Forest
2. Silent Valley – Nilgiri Biosphere Reserve
3. Parambikulam – Dry Deciduous
4. Munnar – Shola Grasslands
5. Vazhachal – Riverine Ecosystem
6. Periyar – Tropical Evergreen Forest
7. Shendurney – Myristica swamps

The program aimed at Training and Capacity building of the frontline staff of the Kerala Forest and Wildlife Department for better interpretation of Odonates and photo and video documentation of the Odonates in selected Protected Areas of Kerala. This program can then be carried forward to all the other protected areas under Kerala Forest and Wildlife Department.

The training at seven selected PAs was completed in December 2022. The inaugural sessions were graced by the presence and active involvement of the respective Wildlife Wardens, Divisional Forest Officers, Assistant Wildlife Wardens, Range Officers, and Deputy Range Forest Officers. The frontline staff who took part in the training program included Section Forest Officers, Beat Forest Officers, Eco-Development Committee (EDC) Members, Trackers, and Guides. Experts from SOS, covered topics like Introduction to Odonates, Field Identification and Taxonomy, How Odonates can be effectively used in Park Management, and also on Odonate Photography during the training programs in each PA. Field sessions were conducted on the second day and participants observed first-hand where and how to observe and identify Odonates. Field sessions we conducted at all the PAs except Munnar Wildlife Division. This was because of heavy rain throughout the day, but instead, it was compensated with interactive activities like additional quizzes and games. The interactive quizzes and photography competition held as part of the part of the program showcased the commendable observation and photography skills of the forest staff. Prizes were given away to the winners of these competitions. The chief guest was gifted the “Enchanted Forest Diary” and all the participants were given foldouts of Common Birds of Kerala and Common Butterflies of Kerala. SOS provided an easily understandable Photo Manual of Dragonflies of Kerala to each participant.

Three of the programs were conducted in association with the Western Ghats Nilgiris Landscape Division of WWF-India. They supported by providing transportation and food for WWF Staff and experts and stationery (notebooks and pens) for the conduct of the program. A WhatsApp group was started for each PA where information on Odonates and study materials are shared. The field staff also regularly upload photos to the group and they are identified with the help of experts.

2.1 Shendurney Wildlife Sanctuary

WWF-India has organized a two-day Odonate Training Program in association with the Society for Odonate Studies (SOS) and Thumbipuranam for the frontline staff and the guides working in the field of Ecotourism in Shendurney Wildlife Sanctuary on 22-23 November 2022. The training was inaugurated by Sri. J.R. Ani, Wildlife Warden of the Sanctuary. He added that the training program should turn into a capacity-building for the eco-tourism guides and the staff members as eco-tourism is the main revenue in the Sanctuary which supports the livelihood of many of the people engaged in it. Sri. Sudheer C.K., the Assistant Wildlife Warden of the Sanctuary welcomed the participants and

the resource person's team. On behalf of WWF-India, Ms. Anushreedha gave an introduction to the training program and the Dragonfly Festival, the parent event of the training program. The sessions on Introduction to Odonates, Odonate Identification (Dragonflies & Damselflies), Ecology and Conservation of Odonates, Odonate Watch & Photo Documentation were led by Sri. V. Balachandran, Adv. Jeffin John, Dr. Sujith V. Gopalan, and Sri. S. Harikrishnan of SOS respectively. An interactive quiz also was conducted in between. Twenty-seven participants attended the event.

On the second day, the participants and resource persons team had a field trip to a nearby Myristica Swamp and to the reservoir side of Parappar Dam. The team observed around 22 species. During the feedback session, almost all the participants were of the opinion that the training was very much interesting and resourceful. They also suggested to increase the duration of the training for a better result.

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Inauguration by J.R. Ani, Wildlife Warden</td>
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Introduction to program by
A.K. Sivakumar, WWF-India</td>
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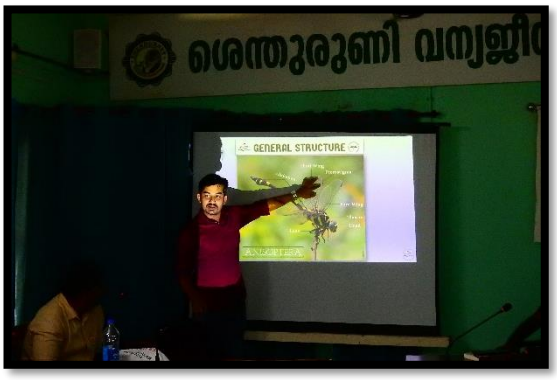
Session by Balachandran</td>
<td> 

Session by Jeffin John</td>
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Session by Dr. Sujith V. Gopalan</td>
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Session by Harikrishnan</td>
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Field Photos

Feedback session

Group Photo

2.2 Parambikulam Tiger Reserve

The Odonate Training Program in association with the Society for Odonate Studies (SOS) and Thumbipuranam for the frontline staff and the guides of Parambikulam Tiger Reserve was held on 2nd and 3rd December 2022. In the absence of Sri R. Sujith, Deputy Director, Parambikulam Tiger Reserve because of other unavoidable official engagements, the Training was inaugurated by Shri Ajayan C.K., Assistant Wildlife Warden, Parambikulam Range. He said that it is important that lesser-known species are also very important part of the habitat, and they also deserve to be studied like the bigger animals like Tigers and Elephants. Mr. Tiju C. Thomas, Associate Coordinator, WGNL Division, WWF introduced the work of WWF India and Anushreedha S.S., Project Officer, Kerala State Office, WWF India spoke to the audience about the Dragonfly Festival. Then Dr. Sujith V. Gopalan, Conservation Biologist and Founder Member of Society for Odonate Studies felicitated the program and spoke about SOS and its work. He also took the introductory session on Odonates and the session on ecology and conservation of Odonates. The sessions on Odonate Identification (Dragonflies) were taken by Jeffin John and identification of Damselflies was taken by Govind Girija. Ecology and Conservation of Odonates, Odonate Watch & Photo Documentation were led by both Jeffin and Govind. An interactive quiz also was conducted in between. Twenty-seven participants attended the event. The program was attended by 30 staff members of the Parambikulam Tiger Reserve and EDC members and guides. Additionally, 20 students from classes 3 to 5 of the Tribal School at Pooppara also participated in the first half of the program, which covered Introduction to Odonates. A quiz program was conducted for them.

Another quiz was also conducted for the Forest Department Staff and Ms. Nishanthi, BFO, Parambiyar Section won the competition.

On the second day, the participants and resource persons team had a field trip to a nearby riverine ecosystem and to the catchment area of Parambikulam Dam. They were encouraged to take good photos. The team observed around 18 species. The participants gathered at the hall after the field trip and the photos from the field were shared and winners were selected for the Best Photo and Person who took photos of maximum species. During the feedback session, almost all the participants believed the training was very interesting and resourceful. They also suggested to increase the duration of the training for a better result.

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<tr><td> 
Inauguration by Ajayan C.K.</td><td> 
Session by Dr. Sujith V. Gopalan</td></tr>
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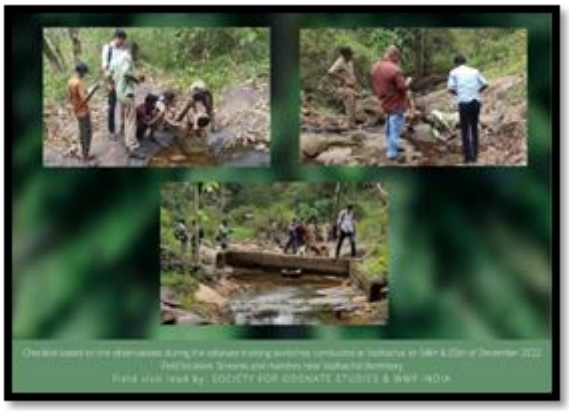
Students from Tribal School, Pooppara</td><td> 
Group Photo</td></tr>
<tr><td>  </td><td>  </td></tr>
<tr><td colspan="2">Field Photos</td></tr>
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2.3 Vazhachal Forest Division

WWF-India has organized a two-day Odonate Training Program in association with the Society for Odonate Studies (SOS) and Thumbipuranam for the frontline staff and the tribal youth of Vazhachal Forest Division on 4-5 November 2022. The training was inaugurated by Sri. Delto L. Marokey, Range Forest Officer, Charpa Range of the Division. He shared his nostalgic childhood day's experience with Dragonflies and his present-day official role in conserving them. He urged the participants to use this training program as a capacity-building opportunity. Sri. Sajeesh V.S., Range Forest Officer, Sholayar Range of the division welcomed the participants and the resource person's team. On behalf of WWF-India, Mr. Vishnu gave an overview of the work done by WWF-India and Mr. A.K. SIvakumar gave an introduction to the training program and the Dragonfly Festival, the parent event of the training program. Mr. Tiju C. Thomas from WWF India also was present for the event and coordinated the overall activities conducted here. The sessions on Introduction to Odonates, Odonate Identification (Dragonflies), Odonate Identification (Damselflies), Ecology and Conservation of Odonates, Odonate Watch & Photo Documentation were led by Sri. Mohammed Sheriff, Adv. Jeffin John, Sri. Vivek Chandran and Sri. Renjith Jacob Mathews, Subject Experts from Society for Odonate Studies respectively. An interactive quiz also was conducted. Thirty-five participants attended the event.

On the second day, the participants and resource person team had a field trip to a nearby stream that heads up to the forest. The team observed around 18 species. During the field trip, all the participants were highly interested in photography using their mobile phones. More than 70 photos were uploaded by them to the WhatsApp group created exclusively for them for the purpose of follow-support. During the feedback session, almost all the participants were of the opinion that the training was very interesting and resourceful. They also suggested providing follow-up sessions to keep them updated with more information. Prizes were given for the Quiz Competition on Dragonflies, Best Dragonfly Photo, Highest Number of Dragonflies Photographed, and Highest Number of Dragonflies Identified after the field trip. There were 36 participants in the program.

Black Stream Glider, Crimson Marsh Glider, Travancore Bamboo Tail, Brown-backed Marsh Dart, Blue Marsh Dart, Tricolored Marsh Dart, Ground Skimmer, Stream Ruby, and Stream Glory were observed in the field.

Group Photo

Inauguration

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<tr><td>Audience</td><td>Sessions</td></tr>
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<tr><td>Field Session</td><td>Prizes for Winners</td></tr>
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2.4 Munnar Wildlife Division

The Odonate Training Program at Munnar Wildlife Division was conducted on the 8th and 9th of December. In the absence of Mr. V. Vinod, Wildlife Warden, the program was inaugurated by Mr. Ajeesh A.S., Wildlife Assistant and he also gave the welcome address. In his inaugural address, he said that the study of Odonates is indeed necessary for understanding the interspecies relationships that exist in specific habitats and Munnar is a unique habitat that has its unique biodiversity. Large mammals and birds are the most observed and studied species, but Odonates also play an important role in ecosystems and need to be studied further. Next Mr. A.K. Sivakumar spoke about WWF-India's Dragonfly Festival and the programs conducted so far as part of it. With this, the inaugural session concluded, and the vote of thanks was delivered.

Frontline staff from the neighboring divisions – Eravikulam National Park, Eravikulam Rajamalai Sanctuary, Kurinjimala Sanctuary, and Anamudi Shola National Park participated. There were 51 participants altogether.

Field observation was not possible at Munnar Wildlife Division on the 2nd day because of heavy rains throughout the day. Instead, the organizers conducted fun and interactive activities on Odonates. A.K. Sivakumar conducted a session on Culture and Art related to Dragonflies. The participants were divided into 4 teams and asked to come up with movie names, songs, book names, and any other art items that had any links to Dragonflies. The team with the highest points came up with 21 items. The foldout (Field Manual on Dragonflies) was given to each participant and then photographs of dragonflies were shown on the screen and the participants were asked to identify them using the manual. This was also an engaging program and everyone put in their best efforts.

Inauguration by Ajeesh A.S.

About the program by A.K. Sivakumar

Session by Dr. Sujith V. Gopalan

Session by Muhammed Haneef

Session by Renjith Mathew

Group Activity

Prize for Quiz Competition

Feedback Session

Group Photo

2.5 Periyar Tiger Reserve

The Odonate Training Program at Periyar Tiger Reserve was conducted on 13th and 14 December 2022. A majority of the staff were given additional duty, as it was Sabarimala pilgrimage season. There were 35 participants from the Reserve. The camp was arranged at Vallakadavu where the organizers were provided food and accommodation. The sessions were conducted in the Conference Hall at Vallakadavu. In the absence of Mr. Patil Suyog Subhash Rao, Deputy Director, Mr. Ajayaghosh N.K. Range Forest Officer Vallakadavu, inaugurated the function. He said that at the Periyar Tiger Reserve, Tigers, and Elephants are given priority in conservation and tourism. Nevertheless, most often, the tourists complain that they did not get a single sighting of the large mammals. He said that if the frontline staff can also show the tourists, other biodiversity and also their importance in the habitat, it will be a learning experience and they need not return empty-handed. Mr. Renjan Mathew Varghese then spoke about the Dragonfly Festival 2022 and the context behind the program. Dr. Anoop Vijayakumar, Conservation Biologist of Periyar Tiger Reserve then spoke about the conservation activities at PTR. The inaugural session concluded with Mr. K.B. Manikantan, Deputy Range Officer, Vallakadavu delivering the vote of thanks.

The training sessions followed with Dr. Sujith V. Gopalan giving an Introduction to Odoantes, Jeffin John on Identification of Dragonflies. Post lunch the sessions continued with Siji P.K. speaking on the Identification of Damselflies. The final session was by Harikrishnan S., who familiarized the participants with how to take macro photos with even a mobile camera.

On the second day, the participants assembled at the Vallakadavu Station by 7.00 am, and after breakfast, they were taken on a field trip to the nearby stream and grassland. It was a good sunny day and the participants were encouraged to take photographs using both a camera and also with mobile for the photography competition. The team observed around 25 species of Odonates. The most common were *Vestalis gracilis, Vestalis apicalis, and Pantala flavescens.*

The other notable species were, *Prodasineura verticalis, Aciagrion approximans krishna, Aciagrion occidentale, Ceriagrion chromothora, Aethriamanta brevipennis, Pantala Brachydiplax chalybea, Crocothemis servilia, Neurothemis fulvia, Neurothemis tullia, Orthetrum pruinosum, Trithemis aurora, and Trithemis festiva.*

The team assembled back at the hall by 11.00 am. After refreshments, an interactive quiz and photography competitions were conducted. Winners were given prizes and the program and the participants gave feedback on the program. They opined that they wished to have more elaborate sessions and field trips for understanding the Odonates and felt confident that they could talk and teach other staff including the tourist guides on spotting and identifying Odonates in PTR. They thanked the organizers for a fantastic 2 days. The program concluded by 1:30 PM. There was a total of 35 participants in the program.

Inauguration by Mr. Ajayaghosh N.K.

DFF Introduction by Renjan Mathew Varghese

Vote of Thanks by Mr. K B Manikantan, Deputy Range Officer

Quiz Competition

Field Visit

Group Photo

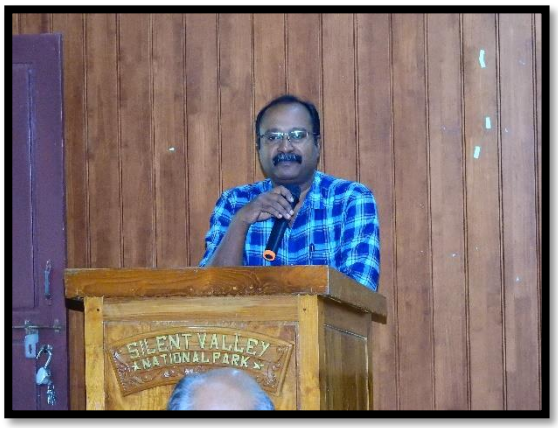
2.6 Silent Valley National Park

Silent Valley National Park is prominent for its rich biodiversity and scenic beauty. These forests are home to around a hundred species of Dragonflies, which are the lesser-knowns, along with the flagship species of these historical forests like Lion-tailed Macaque, Elephants, Tiger, and so on. WWF-India has organized a two-day Odonate Training Program in association with the Society for Odonate Studies (SOS) and Thumbipuranam for the frontline staff and the guides working in the field of Ecotourism in Silent Valley National Park on 16-17 December 2022. The training was inaugurated by Sri. S. Vinod IFS, Wildlife Warden of the Park. He asked his staff team to give due consideration to observing and learning these lesser-knowns as they are pretty good indicators of a healthy ecosystem. Sri. N. Ganeshan, the Assistant Wildlife Warden of Bhavani Range welcomed the participants and the

resource person's team. On behalf of WWF-India, Ms. Anushreedha gave an introduction to the training program and the Dragonfly Festival, the parent event of the training program. The sessions on Introduction to Odonates, Odonate Identification (Dragonflies), Odonate Identification (Damselflies), Ecology and Conservation of Odonates, Odonate Watch & Photo Documentation were led by Dr. Sujith V. Goplan, Sri. Mohammed Sheriff, Ms. Cicy Ann, and Adv. Jeffin John of SOS respectively. An interactive quiz also was conducted in between. Forty participants attended the workshop.

On the second day, the participants and resource person team had a field trip to a nearby swamp and stream from where 27 species were reported. The team observed not only the different species but also a few moments like mating, egg laying, predation of one species by another, etc. During the feedback session, almost all the participants were of the opinion that the training was very much interesting and resourceful. They never knew that there were too many specialties within these tiny creatures. They photographed many species of Dragonflies using their mobile phones. Awards were given to the Best Photograph, Highest Number of Species Photographed, Highest Number of Identifications after the field trip, and a general quiz.

Inauguration by Sri. S. Vinod IFS



About DFF by A.K. Sivakumar

Session by Dr. Sujith V. Gopalan

Session by Muhammed Sheriff

	
Prize for Best Photo of Odonates	Field Photo

2.7 Wayanad Wildlife Sanctuary

The Odonate Training Program for frontline staff of Wayanad Wildlife Sanctuary was held at Gaja IB, Sulthan Bathery, and started at 11.15 am. Mr. Rahul Ravindran, Wildlife Assistant, Wayanad Wildlife Sanctuary welcomed the guests. Ms. Anushreedha, Project Officer, WWF-India gave an overview of WWF and its work and about Dragonfly Festival. Mr. Renjith Kumar, Assistant Wildlife Warden, Sulthan Bathery, inaugurated the event and requested the participants to utilize the training program effectively and to impart the knowledge to their colleagues working with them. He said that Wayanad Wildlife Sanctuary and Wayanad District host unique biodiversity and that they have not yet received a session on Odonates (compared to classes on birds and butterflies) and so this will be a very interesting program for everyone. Felicitation was given by Muhammed Sheriff, Executive Member, SOS, Ayyapan C., President EDC, and Madhavan, EDC member. Vote of thanks was delivered by Mr. Ramesh, SFO. Mr. Jose Mathew, ACF, Wayanad Wildlife Sanctuary, was called for an urgent official matter, but he gave his full support and made all arrangements for the smooth conduct of the program.

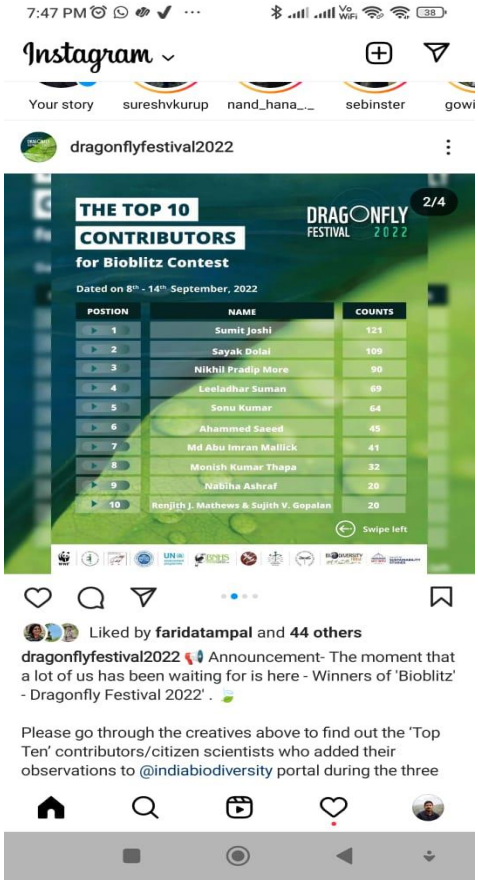
Mr Muhammed Sheriff then gave the Introduction to Odonates. He explained it using a PowerPoint presentation with photos and videos. Next, Jeffin John and Siji P.K. introduced the Dragonflies and elaborated on the Identification Features of the Common Dragonflies found in Kerala. Post lunch, a quiz was conducted and Ms. Suja S., Tholpetty Forest Station won this competition.

The next session was on Ecology and Conservation, and this was taken by Muhammed Haneef. Post this session, participants asked many questions and cleared their doubts. Next, Ms. Siji P.K. and Mr. Ahmed Saeed E.P. introduced the diversity of Damselflies in Kerala. After evening tea, Mr. Jeffin John conducted the session on photo documentation of Odonates. The sessions of day 1 ended at 5:30 PM. The stay for the WWF Staff and Experts from SOS was arranged at Chethalayam Division.

On the second day, 23rd December, the participants and training team assembled near the Elephant camp at Wayanad Wildlife Sanctuary, Muthanga at 9:30 am. After a small tea break, everyone boarded the bus and travelled to the location where the field session was arranged. There was a small stream and a small pond in the area. Thirty-two species of Dragonflies were observed here including two very rare species. The team completed the field activity by 1:00 pm and assembled at the hall. About thirty-two species of Odonates were observed here. The *Indothemis limbata* and *Orthetrum taeniolatum* were the unique species observed here.

 Inaugural Function	 Audience
 Felicitation by Muhammed Haneef	 Session on Odonate Identification
 Field Session	 Field Session
 Prize Distribution	 Prize Distribution

3. BioBlitz



The Staff and Volunteers attended the expert talks and workshops conducted as part of DFF. The Kerala Team also contributed to making the Protocol for BioBlitz. The Volunteers also participated in the BioBlitz Competition and Dr. Sujith V. Gopalan, Renjan Mathew Varghese were amongst the top contributors.

WWF Team

Renjan Mathew Varghese
A.K. Sivakumar
Anushreedha S.S.
Tiju C. Thomas
Vishnu Omanakuttan

SOS Team

Dr. Sujith V. Gopalan
Balachandran V.
Jeffin John
Harikrishnan S.
Muhammed Sheriff
Muhammed Haneef
Renjith Mathews
Siji P.K.
Ahammed Saeed E.P.

Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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