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## **Studies on the aquatic and semi- aquatic angiosperms of Durgapur Dam, Pakur, Jharkhand**

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**Abstract-** The present study deals with the aquatic and Semi- aquatic angiosperms growing in the Durgapur Dam of Pakuria, Pakur. The study was undertaken during the year 2020 to 2022. A total of 45 species under 32 genera over 24 families were reported. Botanical name of each species along with the name of the family and flowering period is mentioned. The nomenclature has been made update as per Angiospermic Phylogenetic Group IV.

**Key words:** Aquatic, Semi-aquatic, Angiosperms, Durgapur dam

### **INTRODUCTION**

Durgapur Dam is the largest water bodies in the district of Pakur. This is also the major tourist spot of the district Pakur. It is situated 21 km away from the Maheshpur block of the Pakur in Talwa -Durgapur Road. While making a study on the aquatic flora of the district, Durgapur dam was also investigated for the presence of aquatic and semi-aquatic angiospermic plants. The study reveals that the dam harbors a variety of aquatic and semi-aquatic angiospermic plant species.

Aquatic and semi -aquatic plants are the plants which are adapted aquatic habitat and spent at least a part of their life cycle in water. They are otherwise called as the macrophytes or hydrophytes. These plants may be emergent, submerged, or floating. In the water bodies these plants provide cover for fish as well as other invertebrates and act as primary producer and produces oxygen too. It is

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evident that the aquatic plants are different from the terrestrial plant as it is very fragile and soon loses its identity as soon as it is taken out of the water. Moreover, these aquatic plants help in the maintenance of the aquatic ecosystem. Therefore, it is important to study these plants.

Several workers have worked on various aspects of aquatic and semi-aquatic plants in different part of the country. Some authors have also referred these plants in their floristic works.<sup>1-21</sup>

### **MATERIALS & METHODS**

In order to perform an exhaustive and precise study and survey of aquatic and semi- aquatic angiospermic species, the dam was visited in regular intervals, at least twice in every season for a period of two years. The plants species were collected in their flowering and fruiting condition. While conducting the survey the aquatic and semi-aquatic plant species were observed carefully, and important characters were recorded in the field note book.,

fresh specimens were collected, brought in the laboratory in carry bags, the plant species were dissected and identification was made with the available keys and local floras.

RESULTS & DISCUSSION

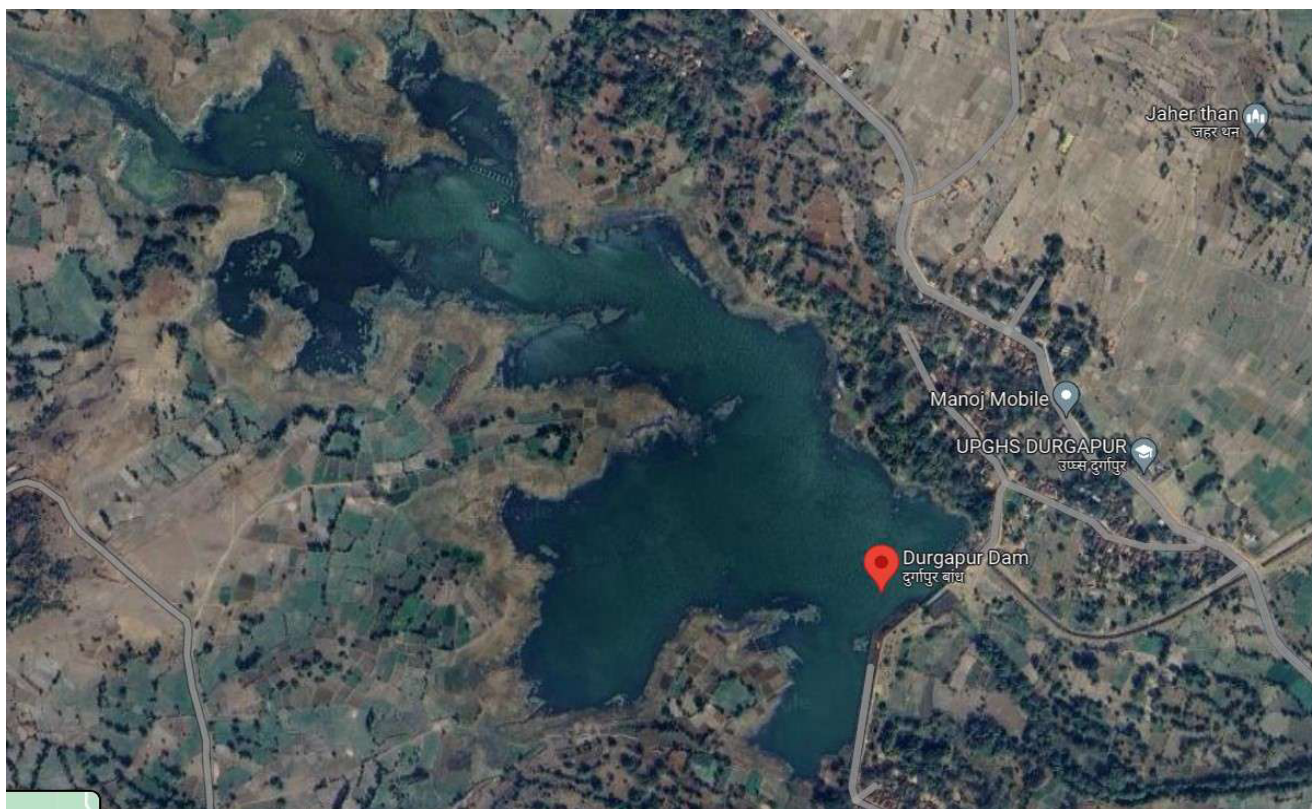
A total number of 45 aquatic and semi aquatic species were reported from Durgapur dam belonging to 24 families and 32 genera. Out of these, 15 families belong to dicot

Table 1- List of Plants of Durgapur Dam with their families and Flowering and Fruiting time

S. N.	Name	Family	Dicot/ Monocot	Flowering/ Fruiting time
1	<i>Alternanthera philoxeroides</i> (Mart.) Griseb.	Amaranthaceae	D	April- Aug.
2	<i>Aponogeton undulatus</i> Roxb	Aponogetonaceae	M	July- Dec.
3	<i>Aponogeton natans</i> (Linn.) Engl. & Krause in Engl.,	Aponogetonaceae	M	July –Dec.
4	<i>Coldenia procumbens</i>	Boraginaceae	M	
4	<i>Ceratophyllum demersum</i> Linn	Ceretophyllaceae	D	Sep.-Feb.
5	<i>Chenopodium murale</i> Linn.,	Polygonaceae	D	Oct.-March
6	<i>Centella asiatica</i> (Linn.) Urban	Apiaceae	D	Feb.-Nov.
7	<i>Commelina benghalensis</i> Linn.	Commelinaceae	D	July-Nov.
8	<i>Cyperus rotundus</i> Linn	Cyperaceae	M	June-Jan.
9	<i>Cyperus corymbosus</i> Rottb.	Cyperaceae	M	Oct.-Nov.
10	<i>Cyperus iria</i> Linn.,	Cyperaceae	M	Aug.-Nov.
11	<i>Cyperus difformis</i> Linn	Cyperaceae	M	Aug.-Dec.
12	<i>Eichhornia crassipes</i> (Mart.) Solms in Dc.	Pontederiaceae	M	April-Nov.
13	<i>Erydra fluctuans</i> Lour.	Asteraceae	D	Dec.-March
14	<i>Hygrophila auriculata</i> (Schum.) Heine	Acanthaceae	D	Sept.-Feb.
15	<i>Hygrophiza aristata</i> (Retz.) Nees ex wt. & Arn.	Asteraceae	M	Aug.-Oct.
16	<i>Hydrilla verticillata</i> (Linn. f.) Royle,	Hydrocharitaceae	M	Nov.-Jan.
17	<i>Ipomoea aquatica</i> Forssk.	Covolulaceae	D	Sept.-Feb.
19	<i>Ludwigia adscendens</i> (Linn.) Hara	Onagraceae	D	Whole year
20	<i>Ludwigia perennis</i> Linn.	Onagraceae	D	Aug.-Jan.
21	<i>Lemna perpusilla</i> Torrey	Lemnaceae	M	May-Sept.
23	<i>Monochoria hastata</i> (Linn.) Solms	Pontederiaceae	M	July-Nov.
24	<i>Monochoria vaginalis</i> (Burm. f.) Presl, Rel. Haenk	Pontederiaceae	M	July-Nov.
25	<i>Nymphaea pubescens</i> Willd	Nympheaceae	D	Aug.-Nov.
26	<i>Nymphaea rubra</i> Roxb. ex Andrews	Nympheaceae	D	Aug.-Nov.
27	<i>Nelumbo nucifera</i> Gaertn.,	Nelumbonaceae	D	July-Nov.
28	<i>Nymphoides hydrophylla</i> (Lour.) Kuntze	Menyanthaceae	D	July-Nov.
29	<i>Nymphoides indica</i> (Linn.) Kuntze.	Menyanthaceae	D	Whole year
31	<i>Ottelia alismoides</i> (Linn.) Pers.	Hydrocharitaceae	M	Sept.-Jan.
32	<i>Oldenlandia corymbosa</i> Linn.	Rubiaceae	D	July - Jan.
33	<i>Phyla nodiflora</i> (Linn.) Greene	Verbenaceae	D	Throughout the year
34	<i>Perscaria glabra</i> (Willd.) M.Gomez.	Polygonaceae	D	Oct.-March
35	<i>Perscaria barbata</i> (L.)H.Hara	Polygonaceae	D	Oct.-March
36	<i>Potamogeton nodosus</i> Poir. in Lamk	Potamogetonaceae	M	Oct.-March
37	<i>Potamogeton crispus</i> Linn.	Potamogetonaceae	M	Oct.-March
38	<i>Portulaca oleraceae</i> Linn	Portulacaceae	D	
39	<i>Pistia stratiotes</i> Linn.	Araceae	M	May-Dec.
40	<i>Ranunculus sceleratus</i> Linn.	Ranunculaceae	D	Nov.- Feb.
41	<i>Rumex dentatus</i> Linn	Polygonaceae	D	
42	<i>Sagittaria trifolia</i> Linn	Alismataceae	M	Oct.-March
43	<i>Spirodela polyrhiza</i> (Linn.) Schleid.	Araceae	M	April-Nov.
46	<i>Vallisneria Spiralis</i> Linn.	Hydrocharitaceae	M	Nov.-March
47	<i>Wolffia globosa</i> (Roxb.) Hartog & Plas	Araceae	M	July-Oct.
48	<i>Zannichellia palustris</i> Linn	Potamogetonaceae	M	Oct.-March

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having 19 genus and 24 species, whereas 9 families belong to monocot having 24 genus and 24 species. Name of all the plants is given in Table 1 along with their name and flowering and fruiting period.



Satellite image of Durgapur Dam, Pakur, Jharkhand, Source: <https://www.google.com/maps/place/Durgapur+Dam/@24.4415548,87.5813214>



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