



AN ANNOTATED CHECKLIST OF CYPERCEAE, ERIOCAULACEAE AND POTAMOGETONACEAE OF CHHATTISGARH

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ABSTRACT

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Tropical forests of Chhattisgarh are known for rich floristic diversity and many important protected forests of central India. An updated annotated checklist is provided for the family Cyperaceae, Eriocaulaceae, and Potamogetonaceae of Chhattisgarh. It has been prepared with the help of herbarium specimens housed in BSA and relevant literatures pertaining to the floristic diversity of the state. A total of 118 taxa (species, subspecies and varieties), representing 15 genera under 3 families are provided in the present communication. Family Cyperaceae has 104 taxa, Eriocaulaceae has 13 taxa and Potamogetonaceae has 5 taxa. At generic level remarkable diversity has been recorded in *Cyperus* (37 species and one variety) and *Fimbristylis* (21 species and one subspecies). The distribution of taxa is highest in Raipur (75 taxa), followed by Bilaspur (70 taxa), Bastar (64 taxa), Surguja (48 taxa), Raigarh (47 taxa), Dantewada (44 taxa), etc.

KEYWORDS: Angiosperm; Monocotyledons; Flora; Diversity; Ecosystem.

INTRODUCTION

Chhattisgarh is a state in central India with an area of 1,35,194 sq. km. The state was created on 1st November 2000 from Madhya Pradesh; it is 9th largest state by area and 7th most populous state of the India. Chhattisgarh shares boarder with Uttar Pradesh in north, Madhya Pradesh in northwest, Maharashtra in southwest, Jharkhand in northeast, Odisha to east, Andhra Pradesh and Telangana in south. It has diverse geography, ranging from hilly terrains to plains with variation in climatic condition. Most of the southern and northern part has hilly terrain and central part is fertile plain. The state has the 3rd largest forest by area in India with many national parks and Achanakmar-Amarkantak Biosphere Reserve.

Forest cover of Chhattisgarh is 46% of its total area; it is dominated by *Shorea robusta* and *Tectona grandis*. According to Champion and Seth (1968) forests of Chhattisgarh may be classified into 3 types: (1) Tropical moist deciduous, (2) Tropical dry deciduous, (3) Montane subtropical.

The tropical moist deciduous forest is dominated by *etc.* In third storey *Indigofera cassioides*, *Woodfordia* mainly deciduous species, subdominant and lower storey *fruticosa*, *Flemingia semialata*, *Ixora arborea*, etc. are mostly evergreen. Top canopy is not very dense with frequently found. Second storey consists of *Gardenia* abundance of climbers and epiphytes. *Tectona grandis*, *turgida*, *Flacourtia indica*, *Balanites aegyptiaca*, *Terminalis alata*, *Haldiana cordifolia*, *Pterocarpus Ziziphus xylopyra*, etc. *Butea superba*, *Bauhinia vahlii*, *marcupium*, *Gmelina arborea*, *Terminalia chebula*, *Cansjera rheedii*, *Calycopteris floribunda*, *Cryptolepis Anogeissus latifolia*, *Mitragyna parvifolia*, *Bridelia buechanani*, *Cocculus hirsulus*, *Tinospora cordifolia*, *retusa*, *Syzygium cumini*, etc. are top canopy species. *Ventilago denticulate*, etc. are common climbers. The second storey is comprises of *Grewia tiliifolia*,

Mallotus philippensis, *Cleistanthus Collins*, *Semecarpus anacardium*, *Kydia calycina*, *Kydia calycina*, *Bauhinia malabarica*, *Wendlandia heynei*, *Syzygium cumini*, *Millusa tomentosa*, *Dillenia pentagyna*. Third storey consists of *Ixora arborea*, *Helicteres isora*, *Petalidium barlerioides*, *Grewia hirsute*, *Woodfordia fruticosa*, *Clerodendrum serratum*, *Phoenix acaulis*, *Eranthemum purpurascens*, *Andrographis paniculata*, etc. Common climbers are *Bauhinia vahlii*, *Ichnocarpus frutescens*, *Erycibe paniculata*, *Smilax zeylanica*, *Millettia extensa*, *Combretum roxburghii*, *Dioscorea hispida*, etc. Forth storey is found in moist mixed deciduous forest mainly consist of *Blepharis maderaspatensis*, *Desmodium pulchellum*, *Arvea lanata*, *Indigofera linnaei*, etc.

Tropicaldrydeciduousforestismixedwithdeciduous trees like, *Shorea robusta*, *Terminalia alata*, *Terminalia bellirica*, *Buchanania lanzan*, *Diospyrous melanoxylon*, *Mallotus philippensis*, *Pterocarpus marsupium*, *Accacia catechu*, *Lannea coromandelica*, *Boswellia serrata*, *Anogeissus latifolia*, *Butea monosperma*, *Sterculia urens*, *Lagerstroemia parviflora*, *Aegel marmelos*,

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N.P. Singh et al., l.c.)	Durg, 26.08.1978, P.C. Pant, 197(BSA); Raipur, 28.09.1974, N.C. Pant, 26.08.1978, P.C. Pant, 20548 (BSA)	837 (BSA)	1962 (BSA)	63115 (BSA); Raigarh, 05.10.1976, D.M. Pant, 976, P.C. Pant, 25451	Cont...
		(BSA); Bilaspur, S.K. Pant, 08.02.1974, N.C. Pant, 5, D.M. Verma, 24719, 1121 (BSA); Surguja,	N.P. Singh et al., l.c.) Raipur, 03.06.1972,	Khanna et al., l.c.)	

Specimen consulted

of M.P Vol-3, pg. 255); Raipur, 10.01.1976, D.M. (BSA); Rajnandgaon, 13.09.1976, P.C. Pant, 25375

1973, S. K. Murti, 19111(BSA); Durg, 25.08.1978, P.C. (BSA); Raipur, 04.06.1976, D.M. Verma, 17527 (BSA); 09.09.1976, P.C. Pant, 25241 (BSA); Surguja, engupta, 20619 (BSA)

05.B.K. Shukla, 63367 (BSA); Bilaspur, 28.04.1964, 11 (BSA), Durg, 04.04.1974, P.C. Pant, 20104 (BSA); ba (Mudgal et al., 1997); Raigarh, 31.03.1976,N.C. 4444(BSA); Raipur, 10.01.1976, D.M. Verma, 23525 agaon, 23.08.1979, P.C.Pant, 37881 (BSA); Surguja, engupta, 19973 (BSA).

76, D.M. Verma (BSA)

84, S.K. Dixit, 42154 (BSA); Bilaspur, 19.02.1972, G. (BSA)

1970, G. Panigrahi, 12748 (BSA); Dantewada, (recorded Khanna et al., 2005); Raigarh, Surguja (recorded on the gh et al., 2001); Raipur, 06.10.1976, D.M.Verma, 25036

1970, G Panigrahi, 13288 (BSA); Durg, 06.08.1978, PC SA); Korba, 17.11.2006, BK Shukla, 67378 (BSA); 976, DM Verma, 23504 (BSA); Rajnandangaon, ant, 25308 (BSA), Surguja, 11.10.2016, ML Malik, 250

ailable (recorded on the basis of N.P. Singh et al., 1.c.)

dgad et al., 1997); Durg, 26.08.1978, P.C. Pant, 29244 02.10.1974, N.C. Rathakrishnan, 21258 (BSA); Raipur 997); Surguja, 22.08.1974, G. Sengupta, 20558 (BSA)

05, B.K. Sukla, 63344 (BSA); Bilaspur, 14.07.1973, S.K. (SA); Dantewada, Dhamtari (Mudgal et al., 1997); Raipur, l. Verma, 24947 (BSA); Rajnandgaon, P.C. Pant, 25477

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Table 1: Enumeration of the taxa of the family Cyperaceae, Eriocaulaceae and Potamogetonaceae

S. No.	Taxon (Family)	Phenology	Distribution	Specimen consulted
Cyperaceae				
1	Actinoscirpus grossus (L.f.) Goetgh. & D.A.Simpson	Sept.- Dec.	Bastar, Raipur, Surguja	Specimen not available (recorded on the basis of f
2	Bolboschoenus maritimus (L.) Palla	May- Jun.	Bastar, Raipur	Bastar, 21.02.1985, G.P. Roy, 42318 (BSA)
3	Bulbostylis barbata (Rottb.) C.B. Clarke	Sept.- Dec.	Bilaspur, Dantewada, Dhamtari, Durg, Jashpur, Korba, Raigarh, Raipur, Rajnandgaon, Surguja	Bilaspur, 09.05.2015, A.P. Tiwari, 75424 (BSA); Pant, 29245 (BSA); Jaspur, 11.04.2016, A.P. Tiw D.M. Verma, 05.06.1976, 23910 (BSA); Raig Rathkrishnan, 21196 (BSA); Rajnandangaon, 29245 (BSA); Surguja, G. Sengupta, 21.08.1974, Raipur, 14.08.1976, D.M. Verma, 24844 (BSA)
4	Bulbostylis densa (Wall.) Hand.-Mazz.	Sept.	Raipur	Bastar, 13.02.1963, G. Panigrahi & C.M. Arora, 6 Bastar, 23.05.1983, G.P. Roy & S.K. Dixit, 3513 Murti, 16.07.1973, 19177 (BSA); Raigarh Rathkrishnan, 19769 (BSA); Raipur, 09.08.197 (BSA); Jashpur, 18.06.2013, A.P. Tiwari, 73 26.06.2013, A.P. Tiwari, 73187 (BSA)
5	Carex baccans Nees	Sept.	Bastar	Bastar, 17.09.2002, A.K. Jha, 56160 (BSA)
6	Carex cruciata Wahlenb.	Sept.	Bastar, Bilaspur, Jashpur, Korba, Raigarh, Raipur, Surguja	Bastar, 24.11.1984, G.P. Roy, 42157 (BSA) Bastar, 25.04.1965, G. Panigrahi & C.M. Arora, 8 Specimen not available (recorded on the basis of f Bastar, 28.11.1972, G. Sengupta, 15968 (BSA); R DM Verma, 17526 (BSA)
7	Carex filicina Nees	Sept.	Bastar	Specimen not available (recorded on the basis of f
8	Carex myosurus Nees	Jan.-Mar.	Bastar	
9	Carex phacota Spreng.	Feb.-Mar.	Bastar, Surguja	
10	Carex teres Boott	Apr.-May.	Bastar	
11	Carex speciosa Kunth	Sept.- Jan.	Bastar, Dhamtari, Raipur, Surguja	
12	Carex stramentitia Boott ex Boeckeler	Apr.- Jun.	Bastar	
13	Courtoisina cyperoides (Roxb.) Soják	Sept.- Mar.	Bastar, Bilaspur, Dhamtari, Korba, Raigarh, Raipur, Rajnandgaon	Bastar, 23.09.2005 S.L. Bondya & A.N. Shukla, 02.10.1974, N.C. Rathkrishnan, 21262 (BSA); Ra Verma, 24970 (BSA); Rajnandangaon, 26.09.1 (BSA)

Table 1 Cont...

S. No.	Taxon (Family)	Phenology	Distribution
14	Cyperus alopecuroides (Rottb.)	Jul. – Dec.	Dhamtari, Raipur, Rajnandgaon
15	Cyperus alulatus J. Kern	Jul. – Dec.	Bilaspur, Dantewada, Dhamtari, Durg, Raipur, Surguja
16	Cyperus brevifolius (Rottb.) Hassk.	Throughout the year	Bastar, Bilaspur, Dantewada, Durg, Korba, Raigarh, Raipur, Rajnandgaon, Surguja
17	Cyperus castaneus	Aug.	Raipur
18	Cyperus cephalotes Vahl (Cyperaceae)	Mar. – Apr.	Bastar, Bilaspur
19	Cyperus compactus Retz. (Cyperaceae)	Sept. – Jan.	Bilaspur, Raipur, Raigarh Dantewada, Surguja
20	Cyperus compressus L. (Cyperaceae)	Jul. – Dec.	Bilaspur, Durg, Dantewada, Dhamtari, Korba, Raipur, Rajnandgaon, Surguja
21	Cyperus corymbosus Rottb. (Cyperaceae)	Dec. – Jan.	Raipur
22	Cyperus cuspidatus Kunth (Cyperaceae)	Aug. – Nov.	Dantewada, Durg, Raigarh, Raipur, Surguja
23	Cyperus cyperoides (L.) Kuntze, Revis. (Cyperaceae)	Aug. – Mar.	Bastar, Bilaspur, Dantewada, Dhamtari, Raipur, Rajnandgaon (BSA)

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Annotated Checklist of Cyperaceae, Eriocaulaceae and Potamogetonaceae of Chhattisgarh

Distribution	Specimen consulted
pur, Durg, arh, on, Surguja, Dhamtari,	Bastar, 21.12.1971, C.B. Das, 14826 (BSA); Bilaspur, 25.07.1973, S.K. Murti, 27120 (BSA); Durg, 05.04.1974, P.C. Pant, 20167 (BSA); Raipur, 26.05.1975, D.M. Verma, 17233 (BSA); Raigarh, 31.03.1976, N.C. Rathkrishnan, 24429 (BSA); Rajnandgaon, 11.04.1974, P.C. Pant, 20307 (BSA), Surguja, 16.03.1974, G. Sengupta, 18920 (BSA); Dantewada, Dhamtari, Kankar (Florist. Diversity Chhattisgarh (Angio.): 507. 2005)
	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
pur, Korba, arh	Bastar, 14.01.2004, A.K. Jha, 57392 (BSA). Bilaspur, Dantewada, Korba, Raigarh, Raipur (Florist. Diversity Chhattisgarh (Angio.): 507. 2005
riya	Bilaspur, 19.07.1973, S.K. Murti, 19250 (BSA); Koriya, 25.06.2013, A.P. Tiwari, 73208 (BSA)
pur, ashpur, aipur, n	Bastar, 29.09.2005, S.L. Bondya & A.N. Shukla, 63259 (BSA); Bilaspur, 29.07.1973, S.K. Murti, 19395 (BSA); Raipur, 06/1976, D.M. Verma, 25038 (BSA); Rajnandgaon, 06.09.1976, P.C. Pant, 20456 (BSA)
rg, Korba, nandagaon,	Rajnandagaon, 16.09.1976, P.C. Pant, 25449 (BSA); Surguja, 19.11.1972, 15527 (BSA)
pur, Koriya, samund, pur, n, Surguja	Bastar, 23.09.2005, S.L. Bondya, 63102 (BSA); Bilaspur, 24.04.1964, C.N. Arora, 3748 (BSA); Koriya, 23.06.2013, A.P. Tiwari, 73030 (BSA); Korba, 17.11.2006, B.K. Sinha, 67429 (BSA); Mahasamund, 18.07.2016, V. Singh, 253 (BSA); Raipur, 17.01.1976, D.M. Verma, 23741 (BSA); Rajnandagaon, 16.09.1976, P.C. Pant, 25438 (BSA); Surguja, 22.03.1974, G. Sengupta, 199969 (BSA)
pur, Dhamtari, pur, n, Surguja	Bastar, 16.9.2002, A.K. Jha, 56130 (BSA); Bilaspur, 23.07.1973, S.K. Murti, 19305 (BSA); Dhamtari, 06.08.1976, 23951 (BSA); Raigarh, 04.04.1976, N.C. Rathkrishnan, 24577A (BSA); Raipur, 27.09.1962, G. Panigrahi, 5080 (BSA); Rajnandagaon, P.C. Pant, 09.09.1976, 25249 (BSA); Surguja, 28.11.1972, G. S. Gupta, 17802 (BSA)
hpur, Korba,	Bilaspur, 29.07.1973, S.K. Murti, 19394 (BSA); Raipur, 08.08.1976, D.M. Verma, 23974 (BSA)

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Table 1 Cont...

S. No.	Taxon (Family)	Phenology	Distribution
24	<i>Cyperus difformis</i> L. (Cyperaceae)	Jul.-Apr.	Bastar, Bilaspur, Raigarh, Rajnandanga, Dantewada, Kanker
25	<i>Cyperus digitatus</i> Roxb. (Cyperaceae)	May-Dec.	Bastar
26	<i>Cyperus distans</i> L.f. (Cyperaceae)	Sept.-Feb.	Bastar, Bilaspur, Dantewada, Raigarh, Rajnandanga
27	<i>Cyperus dubius</i> Rottb. (Cyperaceae)	Oct.-Nov.	Bilaspur, Kanker
28	<i>Cyperus exaltatus</i> Retz. (Cyperaceae)	Sept.-Feb.	Bastar, Bilaspur, Dantewada, Kanker, Rajnandanga
29	<i>Cyperus flavidus</i> Retz. (Cyperaceae)	Sept.-Nov.	Bilaspur, Dantewada, Raigarh, Rajnandanga
30	<i>Cyperus haspan</i> L. (Cyperaceae)	Aug.-Dec.	Bastar, Bilaspur, Dantewada, Kanker, Raigarh, Rajnandanga
31	<i>Cyperus iria</i> L. (Cyperaceae)	Aug.-Feb.	Bastar, Bilaspur, Dantewada, Raigarh, Rajnandanga
32	<i>Cyperus kyllingia</i> Endl. (Cyperaceae)	Aug.-Oct.	Bilaspur, Jashpur

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Phenology	Distribution	Specimen consulted
Oct.	Raipur	Specimen not available (recorded on the basis of N.P. Singh et al., I.c.)
Jul.-Sept.	Jashpur	Jashpur (recorded on the basis of N.P. Singh et al., I.c.)
Aug.-Sept.	Raipur, Surguja	Raipur, 22.01.1976, D.M. Verma, 23866 (BSA); Surguja, 25.08.1974, G. Sengupta, 20617 (BSA)
May	Bastar	Bastar, 26.08.2005, B. K. Sukala 63398 (BSA)
Sept.-Oct.	Raipur	Specimen not available (recorded on the basis of N.P. Singh et al., I.c.)
Aug.-Oct.	Bastar	Specimen not available (recorded on the basis of N.P. Singh et al., I.c.)
Aug.-Oct.	Bilaspur, Korba, Raipur	Bilaspur, 15.04.1965, G. Panigrahi & C.M. Arora, 8577 (BSA); Raipur, 13.01.1976, D.M. Verma, 23596 (BSA)
Aug.-Dec.	Bastar, Bilaspur, Dantewada, Dhamtari, Jaspur, Koriya, Raigarh, Raipur, Koriya, Surguja	Bilaspur, 12.07.1973, S.K. Murti, 19068 (BSA); Jaspur, 20.06.2013, A.P. Tiwari, 73151 (BSA); Koriya, 23.06.2013, A.P. Tiwari, 73031 (BSA); Raipur, 02.06.1969, D.M. Verma, 17441 (BSA)
May	Bastar	Specimen not available (recorded on the basis of N.P. Singh et al., I.c.)
Jul.-Dec.	Bastar, Bilaspur, Dantewada, Raigarh, Raipur, Surguja	Bastar, 20.04.2005, S.L. Bondya & S. Mishra, 62402 (BSA); Bilaspur, 02.08.1976, S.K. Murti, 19469 (BSA); Raigarh, 02.04.1976, N.C. Rathkrishnan, 24531 (BSA); Raipur, 17.08.1976, D.M. Verma, 24910 (BSA); Surguja, 26.11.1972, G. Sengupta, 15927 (BSA)
Feb.-Oct.	Bastar, Bilaspur, Dantewada, Raigarh, Raipur, Rajnandanga, Surguja	Bastar, 20.09.2002, A.K. Jha, 56443 (BSA); Raigarh, 26.02.1976, G. Sengupta, 24190 (BSA); Raipur, 04.10.1976, D.M. Verma, 24964 (BSA); Rajnandanga, 20.09.1976, P.C. Pant, 25523 (BSA); Surguja, 23.02.1976, G. Sengupta, 24130 (BSA)

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Table 1 Cont...

S. No.	Taxon (Family)
33	<i>Cyperus kyllingella</i> Laridon (Cyperaceae)
34	<i>Cyperus laevigatus</i> L. (Cyperaceae)
35	<i>Cyperus latespicatus</i> Boeck (Cyperaceae)
36	<i>Cyperus leucocephalus</i> Retz. (Cyperaceae)
37	<i>Cyperus metzii</i> (Hochst. ex Steud.) Mattf. & Kuekenh. (Cyperaceae)
38	<i>Cyperus</i> <i>melanospermus</i> (Nees) Valek. Suring. (Cyperaceae)
39	<i>Cyperus michelianus</i> (L.) Delile (Cyperaceae)
40	<i>Cyperus niveus</i> Retz. (Cyperaceae)
41	<i>Cyperus nutans</i> Vahl var. <i>nutans</i> (Cyperaceae)
42	<i>Cyperus nutans</i> Vahl var. <i>eleusinoides</i> (Kunth) Haines (Cyperaceae)
43	<i>Cyperus pangorei</i> Rottb. (Cyperaceae)

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Annotated Checklist of Cyperaceae, Eriocaulaceae and Potamogetonaceae of Chhatitigarh

Table 1 Cont...

No.	Taxon (Family)	Phenology	Distribution	Specimen consulted
4	<i>Cyperus pilosus</i> Vahl (Cyperaceae)	Apr.-Oct.	Bilaspur, Raipur, Raigarh, Rajnandangaon, Surguja	Bilaspur, 18.04.1965, G. Panigrahi & C.M. Arora, 8743 (BSA); Raipur, 06.10.1976, D.M. Verma, 25037 (BSA); Raigarh, 02.04.1976, N.C. Rathkrishnan, 24531(BSA). Rajnandangaon (recorded on the basis of N.P. Singh et al., l.c.); Surguja, 20.08.1976, G. Sengupta, 20516 (BSA) Bilaspur, 16.04.1965, G. Panigrahi & C.M. Arora, 8581 (BSA)
5	<i>Cyperus platystylis</i> R. Br. (Cyperaceae)	Apr.- May	Bilaspur, Dantewada, Korba, Raipur	Bilaspur, 13.07.1973, S.K. Murti, 19101 (BSA); Koriya, 24.02.2015, A.P. Tiwari, 73854 (BSA); Surguja, 28.08.1974, G Sengupta, 20520 (BSA)
6	<i>Cyperus polystachyos</i> Rottb. (Cyperaceae)	Aug.- Nov.	Bilaspur, Koriya, Surguja	
7	<i>Cyperus procerus</i> Rottb. (Cyperaceae)	Sept.	Bastar, Dantewada, Rajnandangaon	Bastar, 17.09.1962, K.K. Khanna & A.K. Jha, 56171 (BSA); Rajnandangaon, 16.09.1976, P.C. Pant, 25452 (BSA)
8	<i>Cyperus pulchellus</i> R. Br. (Cyperaceae)	Sept.-Nov.	Bilaspur	Bilaspur (recorded on the basis of N.P. Singh et al., l.c.)
9	<i>Cyperus pygmaeus</i> Rottb. (Cyperaceae)	Aug.- Nov.	Bilaspur, Dantewada, Dhamtari, Raigarh, Raipur	Bilaspur, 07.08.1973, S.K. Murti, 19521 (BSA); Raigarh, 25.05.1996, R.C. Srivastava, 44212 (BSA)
10	<i>Cyperus rotundus</i> L. (Cyperaceae)	Jul.- Apr.	Bastar, Bilaspur, Dantewada, Dhamtari, Korba, Raigarh, Raipur, Rajnandangaon, Surguja.	Bastar, 25.05.1983, G.P. Roy, 35184 (BSA); Bilaspur, 31.07.1973, S.K. Murti, 19445 (BSA); Korba, 29.03.2006, B.K. Shukla, 65040 (BSA); Raipur, 14.08.1976, D.M. Verma, 24840 (BSA); Surguja, 06.05.1964, C.M. Arora, 3908 (BSA)
11	<i>Cyperus squarrosus</i> L. (Cyperaceae)	Sept.-Nov.	Bastar, Bilaspur, Durg, Dhamtari, Raipur, Rajnandangaon, Surguja	Bastar, 24.08.2005, B.K. Shukla 63374 (BSA); Durg, 25.08.1978, P.C. Pant, 29178 (BSA); Raipur, 05.08.1976, P.C. Pant, 23923 (BSA); Rajnandangaon, 10.09.1976, P.C. Pant, 253307 (BSA); Surguja, 28.08.1974, G. Sengupta, 20624 (BSA)
12	<i>Cyperus tenuispica</i> Steud. (Cyperaceae)	Nov.-Feb.	Dantewada, Kanker, Korba, Raigarh, Raipur, Rajnandangaon	Bilaspur, 29.07.1973, S.K. Murti, 19416 (BSA); Korba, 17.11.2006, B.K. Shukla, 67423 (BSA); Raipur, 13.01.1976, D.M. Verma, 23601 (BSA); Raipur, 30.09.1974, N.C. Rathkrishnan, 21230 (BSA); Rajnandangaon, 16.09.1976, P.C. Pant, 25438 A (BSA)
13	<i>Eleocharis acutangula</i> (Roxb.) Schult. (Cyperaceae)	Sept.-Oct.	Durg, Mahasamund, Surguja	Durg, 08.04.1974, P.C. Pant, 20256 (BSA); Raipur, 15.10.1976, D.M. Verma, 25809 (BSA)

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Table 1 Cont...

S. No.	Taxon (Family)	Phenology	Distribution	Specimen consulted	S. No.
54	Eleocharis atropurpurea (Retz.) J. Presl & K. Presl (Cyperaceae)	Aug-Dec.	Bilaspur, Dantewada, Dhamtari, Korba, Raigarh, Raipur, Rajnandgaon	Bastar, 06.03.1984, G.P. Roy, 35574(BSA); Dhamtari, 13.01.1976, 23612 (BSA); Raipur, 26.05.1972, D.M. Verma, 17262 (BSA); Raipur, 26.05.1972, D.M. Verma, 17262 (BSA)	4
55	Eleocharis congesta D. Don (Cyperaceae)	Aug.- Nov.	Bilaspur, Jashpur, Raigarh, Rajnandgaon, Surguja	Jasipur, 20.02.2013, A.P. Tiwari, 73738 (BSA); Raigarh, 17.09.1976, P.C. Pant, 25476 (BSA); Surguja, 21.02.1976, G. Sengupta, 24079 (BSA)	4
56	Eleocharis dulcis (Burm.f.) Hensch. (Cyperaceae)	Sept.- Dec.	Bilaspur, Raipur	Bilaspur, 29.07.1976, S.K. Murti, 19390 (BSA); Raipur, 15.10.1976, D.M. Verma, 25808 (BSA)	4
57	Eleocharis geniculata (L.) Roem. & Schult. (Cyperaceae)	Jan.	Raipur	Raipur, 12.01.1976, D.M. Verma, 23576 (BSA)	4
58	Eleocharis palustris (L.) R. Br. (Cyperaceae)	Apr.	Bilaspur, Durg, Raipur	Durg, 08.04.1974, P.C. Pant, 20256 (BSA); Raipur, 23.09.1962, G. Panigrahi, 5074 (BSA)	4
59	Eleocharis retroflexa (Poir.) Urb. (Cyperaceae)	Sept.-Oct.	Dantewada, Korba, Raigarh Raipur	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)	5
60	Eleocharis spiralis (Rottb.) Roem. & Schult. (Cyperaceae)	Sept.	Raipur, Rajnandgaon	Rajnandgaon, 10.09.1976, P.C. Pant, 25284 (BSA)	5
61	Fimbristylis acuminata Vahl (Cyperaceae)	Sept.- Feb.	Bilaspur, Korba, Raigarh	Bilaspur, 16.04.1965, G. Panigrahi & C.M. Arora, 8601 (BSA); Raigarh, 05.04.1976, N.C. Rathkrishnan, 24600 (BSA)	5
62	Fimbristylis aestivalis (Retz.) Vahl (Cyperaceae)	Sept.-Jan.	Bastar, Bilaspur, Dantewada, Dhamtari, Jashpur, Korba, Raigarh, Raipur	Bastar, 24.05.1983, G.P. Roy, 34010 (BSA); Bilaspur, 24.07.1973, S.K. Murti, 19341 (BSA); Jashpur, 20.06.2018, A.P. Tiwari, 73156 (BSA); Raigarh, 03.02.1974, N.C. Rathkrishnan, 19677 (BSA); Raipur, 27.05.1972, D.M. Verma, 17306 (BSA)	5
63	Fimbristylis albovidis C.B. Clarke (Cyperaceae)	Oct.	Bastar, Raipur, Mahasamund	Mahasamund, 18.07.2016, A.P. Tiwari, 275 (BSA)	5

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Table 1 Cont...

S. No.	Taxon (Family)	Phenology	Distribution	Specimen consulted
64	Fimbristylis argentea (Rottb.) Vahl (Cyperaceae)	Dec.–Jan.	Bastar, Dantewada	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
65	Fimbristylis bisumbellata (Forssk.) Bubani (Cyperaceae)	Oct.	Bastar, Bilaspur, Raipur, Raigarh	Bastar, 15.04.2005, S.L. Bondya & S. Mishra, 62292 (BSA); Bilaspur, 12.02.1972, G. Panigrahi, 15398 (BSA); Raipur, 26.05.1972, D.M. Verma, 17243 (BSA); Raigarh, 31.03.1976, N.C. Rathkrishnan, 24407 (BSA) Specimen not available (recorded on the basis of N.P. Singh et al., l.c.).
66	Fimbristylis cinnamometorum (Vahl) Kunth (Cyperaceae)	Aug.–Oct.	Bastar	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.).
67	Fimbristylis complanata (Retz.) Link (Cyperaceae)	Sept.–Oct.	Bilaspur	Bilaspur, 29.07.1973, S.K. Murti, 19393 (BSA)
68	Fimbristylis dichotoma (L.) Vahl subsp. Dichotoma (Cyperaceae)	Throughout year	Bastar, Bilaspur, Dantewada, Dhamtari, Durg, Jaspur, Kawardha, Korba, Raipur, Raigarh, Rajnandgaon, Surguja	Bastar, 19.02.1963, G. Panigrahi, 6977 (BSA); Bilaspur, 15.07.1973, S.K. Murti, 19144 (BSA); Durg, 04.04.1974, P.C. Pant, 20131 (BSA); Raipur, 17.08.1976, D.M. Verma, 24834 (BSA); Raigarh, 04.04.1976, N.C. Rathkrishnan, 24587 (BSA); Rajnandgaon, 16.09.1976, P.C. Pant, 25442 (BSA); Surguja, 12.02.2014, A.P. Tiwari, 73625 (BSA) Bastar, 28.11.1972, G. Sengupta, 16000 (BSA)
69	Fimbristylis dichotoma (L.) Vahl subsp. podocarpa (Nees) T. Koyama (Cyperaceae)	Aug.–Nov.	Bastar, Bilaspur, Dantewada, Dhamtari, Korba, Raigarh, Raipur, Rajnandgaon, Surguja	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
70	Fimbristylis dipsacea (Rottb.) C.B. Clarke (Cyperaceae)	Oct.–Dec.	Bilaspur, Korba	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
71	Fimbristylis eragrostis (Nees) Hance (Cyperaceae)	Apr.–Sept.	Bastar	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
72	Fimbristylis falcata (Vahl) Kunth (Cyperaceae)	Aug.–Jan.	Bastar, Bilaspur, Koriya, Dhamtari, Raipur	Bastar, 25.05.1983, G.P. Roy, 34034 (BSA); Koriya, 23.06.2013, A.P. Tiwari, 73023 (BSA); Raipur, 02.06.1972, A.P. Tiwari, 17470 (BSA)
73	Fimbristylis ferruginea (L.) Vahl (Cyperaceae)	Oct.	Dantewada, Jashpur	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)

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Table 1 Cont...

S. No.	Taxon (Family)	Phenology	Distribution	Specimen consulted
74	Fimbristylis fusca (Nees) Benth ex C. B. Clarke (Cyperaceae)	May	Bilaspur, Dhamtari, Raipur	Bilaspur, 23.07.1973, S.K. Murti, 19278 (BSA) D.M. Verma, 17522 (BSA)
75	Fimbristylis hookeriana Boeckeler (Cyperaceae)	Aug.–Feb.	Bastar	Bastar, 18.11.1984, G.P. Roy & S.K. Dixit, 36254
76	Fimbristylis intonsa S.T. Blake (Cyperaceae)	Nov.	Surguja	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
77	Fimbristylis littoralis Gaudich. (Cyperaceae)	Sept.–Apr.	Bastar, Bilaspur, Dantewada, Dhamtari, Durg, Raigarh, Raipur, Rajnandgaon, Surguja	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
78	Fimbristylis ovata (Burm.f.) J. Kern (Cyperaceae)	Aug.–May	Bastar, Bilaspur, Dantewada, Korba, Raipur	Bastar, 21.08.1974, G. Sengupta, 20541 (BSA); S.K. Murti, 19494 (BSA); Raipur, 13.08.1976, (BSA)
79	Fimbristylis quinqueangularis Kunth (Cyperaceae)	Sept.–Dec.	Bastar, Bilaspur, Dantewada, Korba, Raipur, Raigarh, Surguja, Rajnandgaon.	Bastar, 22.09.2002, A.K. Jha, 56487 (BSA); Bil Panigrahi, 8795 (BSA); Dantewada, 29.09.1962, S Raipur, 23.09.1961, G. Panigrahi, 5061 (BSA); Ra Rathkrishnan, 245854 (BSA); Rajnandgaon, 05.1 S.K. Srivastava & B.K. Shukla, 47869 (BSA)
80	Fimbristylis schoenoides (Retz.) Vahl (Cyperaceae)	Aug.–Dec.	Bilaspur, Dantewada, Dhamtari, Raipur, Rajnandgaon, Surguja, Koriya	Koriya, 08.10.2012, R.K. Singh, 69336 (BSA)
81	Fimbristylis squarrosa Vahl (Cyperaceae)	May–Jun.	Bastar	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
82	Fimbristylis tetragona R. Br. (Cyperaceae)	Aug.–Nov.	Bastar, Bilaspur, Dantewada, Dhamtari, Korba, Koriya, Raigarh, Raipur, Rajnandgaon, Surguja.	Bastar, 23.09.2002, K.K. Khanna & A.K. Jha, 56487 (BSA); 12.09.2015, A.P. Tiwari, 75431 (BSA); Raipur, 04. 24251 (BSA); Raigarh, 14.11.1971, G. Sengupta, 28.02.2014, R.K. Singh, 72853 (BSA); Rajr 19.09.1976, 25502 (BSA)

Specimen consulted
72, G. Sen Gupta, 17910 (BSA); Bilaspur 14.09.2015, 42 (BSA); Durg, 08.04.1974, P.C. Pant, 20247 (BSA); 17, A.P. Tiwari, 282 (BSA); Koriya, 23.02.2013, A.P. 35A); Korba, 17.11.2006, B.K. Shukla, 67424 (BSA); 1974, N.C. Rathkrishnan, 19636 (BSA); Raipur, . Verma, 17305 (BSA)
2015, A.P. Tiwari, 75303 (BSA); Raigarh, 20.05.1996, 43430 (BSA); Rajnandgaon, 11.09.1976, P.C. Pant, Koriya, 25.06.2013, A.P. Tiwari, 73216 (BSA)
74, G. Sengupta, 20621 (BSA); Raigarh, 10.11.1971, G. (BSA); Koriya, 10.10.2012, R.K. Singh, 69400 (BSA)
71, C.R. Das, 14941 (BSA); Bilaspur, 02.08.1973, S.K. (SA); Durg, 08.04.1974, P.C. Pant, 20248 (BSA); Raipur, . Verma, 25764 (BSA); Rajnandgaon, 16.09.1976, P.C. A)
964, C.M. Arora, 7245 (BSA); Surguja, 04.10.1976, 950 (BSA), Dantewada (recorded on the basis of N.P. 12, G. Sengupta, 15829 (BSA); Bilaspur, 22.11.1972, G. (BSA); Raigarh, 28.09.1974, N.C. Rathkrishnan, 21167
available (recorded on the basis of N.P. Singh et al., l.c.)
available (recorded on the basis of N.P. Singh et al., l.c.)
12, R.K. Singh 69286 (BSA); Rajnandgaon, 16.09.1976, (BSA)
Cont...

Table 1 Cont...

S. No.	Taxon (Family)	Phenology	Distribution
83	Fuirena ciliaris (L.) Roxb. (Cyperaceae)	Oct.–May	Bastar, Bilaspur, Dantewada, Durg, Jaspur, Kanker, Koriya, Korba, Raigarh, Raipur, Surguja
84	Lipocarpus chinensis (Osbeck) Kern (Cyperaceae)	Aug.–Dec.	Bastar, Bilaspur, Dantewada, Koriya, Raigarh, Raipur, Rajnandgaon, Surguja
85	Lipocarpus gracilis (Rich.) Nees (Cyperaceae)	Sept.–Nov.	Rajnandgaon, Surguja
86	Pycreus pumilus (L.) Nees (Cyperaceae)	Aug.–Nov.	Bastar, Bilaspur, Dantewada, Dhamtari, Durg, Korba, Raipur, Rajnandgaon
87	Pycreus sanguinolentus Nees (Cyperaceae)	Sept.–Dec.	Dantewada, Raipur, Raigarh, Surguja
88	Rhynchospora longisetis R. Br. (Cyperaceae)	Oct.–Jan.	Bastar, Bilaspur, Dantewada, Raigarh, Surguja
89	Rhynchospora rubra (Lour.) Makino (Cyperaceae)	Oct.	Bastar
90	Scleria annularis Nees ex Steud. (Cyperaceae)	Oct.–Nov.	Bastar, Bilaspur, Dantewada
91	Scleria biflora Roxb. (Cyperaceae)	Sept.–Nov.	Dantewada, Rajnandgaon

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Location	Specimen consulted
Bastar, Korba, Raipur, Surguja	Bastar, 06.10.2005, S.L. Bondya, 63566 (BSA); Bilaspur, 25.10.1970, G. Panigrahi, 12930 (BSA); Koriya, 23.06.2013, A.P. Tiwari, 73028 (BSA); Raipur, 16.10.1976, D.M. Verma, 25045 (BSA)
Raipur	Raipur, 06.10.1976, D.M. Verma, 25044 (BSA)
Specimen not available (recorded on the basis of N.P. Singh <i>et al.</i> , l.c.)	
Bastar, Raigarh	Bastar, 13.02.1963, G. Panigrahi, 6886 (BSA); Bilaspur, 01.08.1973, S.K. Murti, 19452 (BSA); Koriya, 23.02.2013, A.P. Tiwari, 73835 (BSA)
Bastar, Durg, Raipur	Bastar, 06.03.1984, G.P. Roy & S.K. Dixit, 35563 (BSA); Bilaspur, 12.02.1972, G. Panigrahi, 15375 (BSA); Raipur, 12.01.1973, D.M. Verma, 17691 (BSA); Raigarh, 02.02.1974, N.C. Rathkrishnan, 34633 (BSA); Rajnandgaon, 16.09.1976, P.C. Pant, 25457 (BSA)
Bastar, Durg, Raigarh, Surguja	Bastar, 24.05.1983, G.P. Roy, 35197 (BSA); Bilaspur, 10.02.1972, G. Panigrahi, 15288 (BSA); Durg, 05.04.1974, P.C. Pant, 20166 (BSA); Raigarh, 15.11.1971, G. Sengupta, 16323 (BSA)
Bastar, Dhamtari, Raigarh, Rajnandgaon	Bastar, 25.05.1983, G.P. Roy, 35196 (BSA); Durg, 08.04.1974, P.C. Pant, 20258 (BSA); Raipur, 02.09.1960, G. Panigrahi, 5075 (BSA); Rajnandgaon, 16.09.1976, P.C. Pant, 25453 (BSA)
Bastar, C.M. Arora	Bastar, 15.03.1974, G. Sengupta, 18883 (BSA); Bilaspur, 05.05.1969, C.M. Arora, 3889 (BSA); Raigarh, 24.11.1971, G. Sengupta, 16600 (BSA)
Bastar, S.K. Murti, Raigarh, Raipur	Bastar, 23.08.2005, B.K. Shukla, 63322 A (BSA); Bilaspur, 29.07.1973, S.K. Murti, 19417 (BSA); Durg, 26.08.1978, P.C. Pant, 29236 (BSA); Raigarh, 02.10.1974, N.C. Rathkrishnan, 21260 (BSA); Raipur, 24.01.1976, D.M. Verma, 23893 (BSA); Rajnandgaon, 17.09.1976, 25473 (BSA)
Specimen not available (recorded on the basis of N.P. Singh <i>et al.</i> , l.c.)	

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Table 1 Cont...

S. No.	Taxon (Family)	Phenology	District
92	<i>Scleria levis</i> Retz. (Cyperaceae)	Oct.–Feb.	Bastar, Bilas Koriya, Raip
93	<i>Scleria lithosperma</i> (L.) Sw. (Cyperaceae)	Throughout the year	Raipur
94	<i>Scleria pergracilis</i> (Nees) Kunth (Cyperaceae)	Oct.–Mar.	Bastar, Bilas
95	<i>Scleria terrestris</i> (L.) Fassett (Cyperaceae)	Aug.–Oct.	Bastar, Bilas
96	<i>Schoenoplectiella</i> <i>articulata</i> (L.) Lye (Cyperaceae)	Sept.	Bastar, Bilas Dantewada, I Raigarh, Raip Rajnandgaon
97	<i>Schoenoplectiella</i> <i>juncoides</i> (Roxb.) Lye	Aug.–Nov.	Bastar, Bilas Korba, Raiga
98	<i>Schoenoplectiella</i> <i>lateriflora</i> (J.F.Gmel.) Lye	Throughout the year	Bastar, Bilas Dantewada, I Durg, Korba, Raipur, Raip Surguja
99	<i>Schoenoplectiella</i> <i>mucronata</i> (L.) J.Jung & H.K. Choi (Cyperaceae)	Aug.–Dec.	Bastar, Bilas Raigarh
100	<i>Scirpus squarrosus</i> L. (Cyperaceae)	Oct.–May	Bastar, Bilas Dantewada, I Korba, Raiga Rajnandgaon
101	<i>Scirpus tuberosus</i> Desf. (Cyperaceae)	Feb.–Jun.	Raipur

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Annotated Checklist of Cyperaceae, Eriocaulaceae and Potamogetonaceae of Chhatisgarh

Phenology	Distribution	Specimen consulted
Eriocaulaceae		
Sept.–Oct.	Raipur	Raipur, 07.11.1976, DM Verma 25102 (BSA)
Nov. – Mar.	Bastar, Raigarh, Surguja, Bilaspur	Bastar, 13.02.1963, G. Panigrahi & C.M. Arora 6864 (BSA); Raigarh, 10.02.1976, N.C. Rathkrishnan, 19817 (BSA); Surguja, 06.03.1990, G. Sengupta, 35124 (BSA); Bilaspur, Apr 1965, G. Panigrahi 9013 (BSA)
Aug. – Nov.	Bastar, Bilaspur, Dantewada, Mahasamund, Raigarh, Raipur, Rajnandgaon	Bastar, 21.09.2002, K.K. Khanna & A.K. Jha, 67871 (BSA); Rajnandgaon 16.09.1976, P.C. Pant, 25443 (BSA); Raipur, 06.10.1976, D.M. Verma, 25006 (BSA)
Aug.–Oct..	Bastar, Bilaspur	Bilaspur, 08.02.1972, G. Panigrahi, 15267 (BSA)
Sept.–Oct.	Raipur	Raipur, 09.11.1971, G. Sengupta, 16061 (BSA)
Feb.	Ambikapur, Bastar, Bilaspur, Korba	Ambikapur, 8.12.1972, G.S. Gupta, 17942 (BSA); Bastar, 13.2.1963, G. Panigrahi & C.M. Arora 6864 (BSA); Bilaspur, 18.04.1965, C.M. Arora 8699 (BSA)
Nov.–Dec.	Surguja	Surguja, (recorded on the basis of N.P. Singh et al., l.c.)
Oct.–Feb.	Bastar, Raigarh, Raipur	Bastar, 19.02.1963, G. Panigrahi & Arora, 4036 (BSA); Raigarh, 02.02.1974; N.C. Rathkrishnan, 19642 (BSA)
Sept.–Apr.	Bastar, Bilaspur, Dantewada, Durg, Kanker, Korba, Raigarh, Raipur, Rajnandgaon, Surguja	Bastar, 12.03.1984, G.P. Roy & R.D. Dixit, 35302 (BSA); Bilaspur 21.02.1972, G. Panigrahi, 16826 (BSA); Dantewada, 12.02.1963, G. Panigrahi, 6778 (BSA); Durg, 08.04.1984, P.C. Pant, 20244(BSA); Korba, 10.02.1972, G. Panigrahi, 15328 (BSA); Raigarh, 07.02.1974, N.C. Rathkrishnan, 19738 (BSA); Raipur, 15.01.1976, P.C. Pant, 23653 (BSA); Rajnandgaon, 06.11.1974, P.C. Pant, 21599 (BSA), Surguja, 25.02.1976, G. Sengupta, 15597 (BSA)

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Table 1 Cont...

S. No.	Taxon (Family)
102	Eriocaulon achiton Koern.
103	Eriocaulon breviscapum Koern.
104	Eriocaulon cinereum R. Br.
105	Eriocaulon cuspidatum Dalzell (Eriocaulaceae)
106	Eriocaulon hamiltonianum Mart. (Eriocaulaceae)
107	Eriocaulon longicuspe Hook. f. (Eriocaulaceae)
108	Eriocaulon nepalense Prescott ex Bong. (Eriocaulaceae)
109	Eriocaulon parviflorum (Fyson) Ansari & Balakr. (Eriocaulaceae)
110	Eriocaulon quinquangulare L. (Eriocaulaceae)

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No.	Taxon (Family)	Phenology	Distribution	Specimen consulted
1111	Eriocaulon raipurense K. K. Khanna & Mudgal & An. Kumar (Eriocaulaceae)	Oct.-Nov.	Raipur, Surguja	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
1112	Eriocaulon rajendrababui Ansari & Balakr. (Eriocaulaceae)	Nov.	Rajnandgaon	Rajnandgaon (recorded on the basis of N.P. Singh et al., l.c.)
1113	Eriocaulon sollyanum Royle (Eriocaulaceae)	Oct.-Feb.	Bastar, Raipur, Surguja	Raipur, 14.10.1976, D.M. Verma, 25782 (BSA)
1114	Eriocaulon truncatum Buch.-Ham. ex Mart. (Eriocaulaceae)	Apr.-Dec.	Bilashpur, Raigarh, Surguja	Bilaspur, 10.12.1969, C.M. Arora, 9534 (BSA); Raigarh, 04.04.1976, K.K. Khanna, 30430 (BSA), Surguja, 04.02.2006, B.K. Shukla, 64093 (BSA)
Potamogetonaceae				
1115	Potamogeton crispus L.	Nov.-Jun.	Bilaspur, Raipur, Surguja, Bastar	Bilaspur, 16.02.1972, G. Panigrahi 16486 (BSA); Bastar, 01.03.1985, G.P. Roy & S.K. Dixit 42329 (BSA); Korba, 28.03.2006, B.K. Shukla, 64996 (BSA)
1116	Potamogeton nodosus Poir.	Oct.-Jun.	Bilaspur, Raipur, Raigarh	Raipur (Deodhara), 12.10.1976, D.M. Verma 25734 (BSA); Raigarh (Saranggarh), 19.03.1976, N.C. Rathkrishnana 24351 (BSA); Bilashpur (Kudia), 16.02.72, G. Panigrahi 15487 (BSA)
1117	Potamogeton perfoliatus L.	Nov.-Mar.	Bijapur, Bilashpur	Bijapur, 14.11.1962, G. Panigrahi 5857 (BSA); Bilashpur (Behari), 24.02.1972, G. Panigrahi 16858 (BSA)
1118	Potamogeton octandrous Poir.	Feb.	Surguja	Specimen not available (recorded on the basis of N.P. Singh et al., l.c.)
1119	Stuckenia pectinata (L.) Börner	Nov.-Apr.	Bilaspur, Raipur	Raipur, Raipur, 17.06.1972, D.M. Verma 17734 (BSA); 12.10.1976, D.M. Verma 25734 (BSA); Raigarh (Saranggarh), 19.03.1976, N.C. Rathkrishnana 24351 (BSA); Bilashpur (Kudia), 16.02.72, G. Panigrahi 15487 (BSA)

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Montane subtropical forests are confined to Bastar and Bilaspur area on hilly tracts. These are dense forests and compose of evergreen elements. Top canopy consists of *Canthium dicoccum*, *Celtis cinnamomea*, *Chionanthus ramiflorus*, *Syzygium cumini*, *S. nervosum*, *Wendlandia heynei*, etc. Second storey component are *Symplocos lauria*, *S. racemosa*, *Glochidion multiloculare*, *Grewia tiliifolia*, *Mallotus philippensis*, *Memecylon umbellatum*, etc. In third storey *Melastoma malabathricum*, *Rhinacanthus nasuta*, *Pogostemon benghalense*, etc. are mainly found. Noticeable climbers in this type of vegetation are *Cansjera rheedii*, *Calycopteris floribunda*, *Symphorema polyandrum*, *Smilax zeylanica*, *Clematis smilacifolia*, etc.

After review of the past publications on the diversity of angiosperm of Chhattisgarh viz. by Wood (1902), Hains (1916), Narayanaswami and Mooney (1941), Mooney (1942), Raizada (1947), Tiwari (1957, 1963), Tiwari and Maheshwari (1963, 1965), Unni (1967b), Subramanyam and Henry (1967), Arora (1968), Champion and Seth (1968), Saxena (1973), Saxena and Khotale (1976), Verma and Chandra (1981), Verma et al. (1985), Roy and Chaturvedi (1987), Panigrahi and Murthi (1989), Dixit and Roy (1992a), Dixit and Roy (1992b), Verma, et al. (1993), Kumar (1993, 1995, 1998), Mudgal et al. (1997), Murthi and Panigrahi (1999), Khanna et al. (2001), Singh et al. (2001), Jha and Khanna (2002a), Jha and Khanna (2003). it was concluded that the updated checklist of the Cyperaceae, Eriocaulaceae and Potamogetonaceae is not available; therefore, present work has been taken up with the objective of studying the diversity in family Cyperaceae, Eriocaulaceae and Potamogetonaceae in Chhattisgarh.

MATERIAL AND METHODS

The data has been collected from the herbarium specimens preserved at herbarium of Central Regional Circle, Botanical Survey of India, Allahabad (BSA) and relevant literatures published on Chhattisgarh (Mudgal et al., 1997; Singh et al., 2001; Khanna et al., 2005). In present treatment, list of herbarium under above mention family have been shorted and list of taxon with collection data have been noted down. After verification of the species with relevant literatures, left-out species were added to the list. Information given on annotation slips was considered and details of the consulted specimens have been compiled with the associated taxa. Further, phenological information and distribution at district level have been compiled from herbarium (BSA) and literatures. Nomenclatures of the taxa has been updated with help of International Plant Names Index (IPNI) <https://www.ipni.org/> and Plants of the World Online (POWO) <https://powo.science.kew.org/>.

RESULTS AND DISCUSSION

A total of 118 taxa have been enumerated in present communication (Table 1). In family Cyperaceae, a total of 102 species, one subspecies (*Fimbristylis dicotoma* subsp. *podocarpa*) and one variety (*Cyperus. nutans* var. *elensinoides*) have been documented. Family Cyperaceae is represented by 12 genera and the maximum representation is by genera *Cyperus* (37 species and one variety), followed by *Fimbristylis* (21 species and one subspecies), *Scirpus* (9 species), *Carex* and *Eleocharis* (8 species), *Scleria* (6 species), etc. (Fig. 1). Family Potamogetonaceae has two genera *Potamogeton* (4 species) and *Stuckenia* (1 species). Family Eriocaulaceae is represented by one genus *Eriocaulon* having 13 species.

Out of 33 districts, distribution of taxa in 17 districts have been recorded maximum number of taxa has been documented Raipur (75 taxa), Bilaspur (70 taxa), Bastar (64 taxa), Surguja (48 taxa), Raigarh (47 taxa), Dantewada (44 taxa), Korba (32 taxa), Dhamtari and Rajnandgaon (25 taxa each), Durg (20 taxa), Koriya (12 taxa), Jashpur (8 taxa), Kanker and Mahasamund (4 taxa each), Jaspur (3 taxa), Kawardha (2 taxa) and Bijapur (1 taxa) (Fig. 2). The distribution in the old districts is recorded because herbarium specimens are collected before creation of new districts. Observation of phenology shows that flowering and fruiting time of four species (*Cyperus brevifolius*, *Fimbristylis dicotoma*, *Scleria lithosperma* and *Scirpus lateriflorus*) are throughout the year, three species have 10 months of flowering and fruiting time (*Cyperus difformis*, *Cyperus rotundus*, *Fimbristylis ovata*) and 19 species has only one month of flowering and fruiting time. Fig. 3 shows that out of 118 taxa, 72 taxa have reproductive phase in month of October, 70 taxa have reproductive phase in month of September, 59 taxa have reproductive phase in month of November, 44 taxa have reproductive phase in month of December, 42 taxa have reproductive phase in month of August, etc.

Distributions of taxa were documented on the basis of herbarium collection data and authentic literatures. The herbarium collection data of 78 taxa were available and distribution records of rest of the 24 taxa were taken from authentic literatures (Khanna et al., 2005).

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