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Diversity and distribution of Araceae in Odisha: A report

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Abstract
The diversity of Araceous species in Odisha has remained largely undocumented, with no comprehensive checklist available until now. In this study, we conducted an in-depth review of existing literature alongside targeted fieldwork to enhance the understanding of Araceous flora of Odisha. As a result, we present the first detailed checklist of Aroids in the state, encompassing 141 species. Our field investigations led to the discovery of four species previously unrecorded in Odisha. While this list does not represent a complete inventory of all Araceae found in the state, it stands as the most thorough compilation to date. Continued exploration and sampling are expected to reveal additional species and expand the known biodiversity of aroid species in the State.

Keywords: Araceae, aroids, Odisha flora, species diversity, new records

Introduction

The monocotyledonous family Araceae comprise about 147 genera and 4392 species of herbs and vines [1]. A majority of them are epiphyte and climbers. They are mainly distributed in tropical Asia and the New World tropics and to a less extent in tropical Africa. Roughly half of the species of the family belongs to the genera *Anthurium* and *Philodendron*, both of which are exclusively Neotropical. Several smaller geographical regions harbour concentrations of endemic taxa. It is the third largest family of monocots and is divided into eight subfamilies, all of which are believed to have evolved before the Cretaceous–Tertiary (K/T) boundary and is considered as one of the oldest family of the angiosperms [2-5] with fossil pollen assignable to the clade Pothoideae–Monsteroideae from the Late Barremian–Aptian (Early Cretaceous) period, about 120-110 million years ago[6] and macrofossils apparently related to Aroideae, found in other deposits with a similar age [7]. Although a fully updated and exhaustive list of aroid species in Odisha is still unavailable, this paper offers a significant step forward by presenting a consolidated checklist. The checklist integrates data from previously published literatures along with findings from recent fieldwork. As a result of these new surveys, four aroid species have been recorded for the first time in Odisha. The present work provides detailed notes on these newly documented species and represents the most complete checklist of Araceae known from Odisha to date.

Material and Methodology

1. Study area

The present investigation was mainly based on material collected by the authors in the plains and hills of the states of Odisha which lies between the North latitude 17^0.78'N & 22^0.73'N and East longitude 81^0.37'E and 87^0.53'E.

2. Methodology

Between 2012 and 2024, numerous exploratory trips were conducted across different seasons to study plant populations in the field and to make extensive and comprehensive collections from various regions of Odisha. Several areas, including the highest point in the state - Deomali (1,672 m) as well as Sinkaram (1,620 m), Golikoda (1,617 m), and Yendrika (1,582 m), were visited frequently. Both plains and hill regions were covered. Repeated visits were made to locations where specific species were known to occur, with efforts focused on collecting specimens in flowering and/or fruiting stages. During these surveys, data on habit, habitat, relative abundance, distribution, and other relevant ecological information were carefully recorded. Herbarium techniques followed those outlined by Fosberg and Sachet (1965) [8]. Voucher and other collected specimens were mounted on standard herbarium sheets, identified, accessioned, and incorporated into the herbaria of Department of Botany, Utkal University, Bhubaneswar and Nimapara Autonomous College, Puri. For species identification, The Flora of Orissa [9] was used along with more recent revisionary and critical taxonomic works. Initial observations were made in the field using a hand lens, and further detailed examination was carried out in the herbarium using a dissection microscope. Specimens were cross-checked with authentic herbarium material housed at Department of Botany, Utkal University, Bhubaneswar. In addition, critical studies were carried out on specimens deposited at Utkal University, the Regional Plant Resource Centre (RPRC), and the CSIR-IMMT(RRLB), Bhubaneswar. Eventually all relevant scientific literature pertaining to the Araceae of Odisha was carefully reviewed and used in compiling the checklist. Wherever possible, original references were consulted to eliminate any records based on misinterpretations. Illustrations have been made for the four new records that are reported during the study. Photographs of specimens taken in the field are also provided for easy identification.

Results and Discussion

Table 1: List of Araceous species found in Odisha

1. Sub-family: Aroideae Arn.				
1. Tribe: Agalonemateae Engl.				
1. Genus: AGLAONEMA Schott				
Sl. No.	**Botanical name**	**Occurrence and Status**	**Habit**	**Habitat**
1.	*Aglaonema commutatum* Schott	Cultivated	H	Sciophyte
*	*A. commutatum* Schott cv 'Pink lady'	Cultivated	H	Sciophyte
**	*A. commutatum* cv 'Anyamanee'	Cultivated	H	Marshy sciophyte
**	*A. commutatum* cv 'Emerald beauty'	Cultivated	H	Marshy sciophyte
**	*A. commutatum* cv 'Silver Bay'	Cultivated	H	Marshy sciophyte
**	*A. commutatum* cv 'Widuri'	Cultivated	H	Marshy sciophyte
2.	*Aglaonema costatum* N.E.Br.	Cultivated	H	Marshy sciophyte
3.	*Aglaonema marantifolium* Bl.	Cultivated	H	Marshy sciophyte
4.	*Aglaonema modestum* Schott ex Engl.	Cultivated	H	Marshy sciophyte
5.	*Aglaonema robeleynii* (Geert) Pitcher & Manda [Syn. *Aglaonema crispum* (Pitcher & Manda) Nicolson]	Cultivated	H	Marshy sciophyte
2. Tribe: Areae R.Br. ex Duby				
2. Genus: ARUM L.				
*	*Arum italicum* Mill. var *marmoratum*	Cultivated	H	Marshy sciophyte
**	*A. italicum* Mill. cv 'X-Ray'	Cultivated	H	Marshy sciophyte
6.	*A. palaestinum* Boiss	Cultivated	H	Marshy sciophyte
3. Genus: DRACUNCULUS Mill.				
7.	*Dracunculus vulgaris* Schott	Cultivated	H	Marshy sciophyte
4. Genus: THERIOPHONUM Bl.				
8.	*Theriophonum fischeri* Sivad.	Cultivated	H	Marshy sciophyte
9.	*T. minutum* (Willd.) Baill.	Wild	H	Marshy sciophyte
5. Genus: TYPHONIUM Schott				
10.	*Typhonium blumei* Nicolson & Sivad.	Cultivated	H	Marshy sciophyte
11.	*T. flagelliforme* (G. Lodd.) Bl.	Cultivated	H	Marshy sciophyte
12.	*T. trilobatum* (L.) Schott	Cultivated	H	Marshy sciophyte
6. Genus: SAUROMATUM Schott				
13.	*Sauromatum horsfieldii* Miq.	Cultivated	H	Marshy sciophyte
3. Tribe: Arisaemateae Nakai				
7. Genus: ARISAEMA Mart.				
14.	*Arisaema barnesii* Fisch. [Syn. *Arisaema tylophorum* Fisch.]	Cultivated	H	Marshy sciophyte
15.	*A. ciliatum* H. Li	Cultivated	H	Marshy sciophyte
16.	*A. concinnum* Schott	Cultivated	H	Marshy sciophyte
17.	*A. consanguineum* Schott	Cultivated	H	Marshy sciophyte
**	*A. consanguineum* cv 'The Perfect Wave'	Cultivated	H	Marshy sciophyte
**	*A. consanguineum* cv 'Poseidon'	Cultivated	H	Marshy sciophyte
**	*A. consanguineum* cv 'Siren's Song'	Cultivated	H	Marshy sciophyte
18.	*A. costatum* (Wall.) Mart.	Cultivated	H	Marshy sciophyte
19.	*A. dracontium* (L.) Schott	Cultivated	H	Marshy sciophyte
20.	*A. fargesii* Buchet	Cultivated	H	Marshy acidophyte
21.	*A. heterophilic* Bl.	Cultivated	H	Marshy sciophyte
22.	*A. saxatile* Buche	Cultivated	H	Marshy acidophyte
23.	*A. sazensoo* (Blume) Makino	Cultivated	H	Marshy sciophyte
**	*A. sazensoo* (Blume) Makino cv 'Silver Center'	Cultivated	H	Marshy acidophyte
24.	*A. sikokianum* Franch. & Sav.	Cultivated	H	Marshy sciophyte
**	*A. sikokianum* Franch. & Sav. cv 'Silver Center'	Cultivated	H	Marshy acidophyte
25.	*A. taiwanense* J. Murata	Cultivated	H	Marshy sciophyte
***	*A. taiwanense* J. Murata ssp. *brevipedunculatum*	Cultivated	H	Marshy sciophyte
**	*A. taiwanense* cv 'Silver Heron'	Cultivated	H	Marshy sciophyte
***	*A. thunbergii* Blume ssp. *urashima*	Cultivated	H	Marshy sciophyte
26.	*A. tortuosum* (Wall.) Schott	Frequent in open hill forest	H	Marshy lithophyte
27.	*A. triphyllum* (L.) Schott	Cultivated	H	Marshy sciophyte as well as also lithophyte
**	*A. triphyllum* cv 'Black Jack'	Cultivated	H	Marshy sciophyte
**	*A. triphyllum* cv 'Mrs. French'	Cultivated	H	Marshy sciophyte
**	*A. triphyllum* cv 'Starburst'	Cultivated	H	Marshy sciophyte

	4. Tribe: Calleae Bartl.			
	8. Genus: CALLA L.			
28.	*Calla palustris* L.	Cultivated	H	Marshy hydrophyte
5. Tribe: Caladieae Schott				
9. Genus: CALADIUM Vent.				
29.	*Caladium bicolor* (Aiton) Vent.	Cultivated, also found as an escape	H	Marshy sciophyte
**	*C. bicolor* cv 'Aaron'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Allure'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Apple Blossom'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Baiman'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Berries & Burgundy'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Blushing Bride'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Bold & Beautiful'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Bombshell'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Bottle Rocket'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Broken Heart'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Bubble'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Candidum'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Candidum Junior'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Candidum Sr.'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Candyland'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Carolyn Whorton'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Carousel'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Celebration'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Clowning Around'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Crystal Moon'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Dawn to Dusk'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Day Dreamer'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Debutante'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Fannie Munson'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Festivia'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Florida Sweetheart'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Freckles'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Freida Hemple'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Ginger land'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Heart & Soul'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Heart's Delight'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Hot Lips'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'June Bride'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Khong Kwan'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Lemon Blush'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Mesmerized'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Miss Muffett'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Monument'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'New Wave'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Party Punch'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Peppermint'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Pink Beauty'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Pink Gem'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Pink Symphony'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Postman Joyner'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Pretty Pink'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Puppy Love'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Radiance'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Raspberry Moon'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Red Devil'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Red Flash'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Red Frill'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Red Glamour'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Red Kujang'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Rich of Thai'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Rosebud'	Cultivated	H	Marshy sciophyte

**	*C. bicolor* cv 'Rosemary'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Rubicundum Bicolor'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Scarlet Flame'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Snow Drift'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Southern Charm'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Splash of Wine'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Starburst'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Strawberry Star'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Summer Breeze'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Tears of The Sun'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Tickle Me Pink'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'Tiki Torch'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'White Butterfly'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'White Cap'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'White Christmas'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'White Cranberry Star'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'White Majesty'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'White Marble'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'White Queen'	Cultivated	H	Marshy sciophyte
**	*C. bicolor* cv 'White Wing'	Cultivated	H	Marshy sciophyte
30.	*Caladium hortulanum* Bridsey	Cultivated	H	Marshy sciophyte
10. Genus: PHYLLOTAENIUM André				
31.	*Phyllotaenium lindenii* André	Cultivated	H	Sciophyte
11. Genus: SYNGONIUM Schott				
32.	*Syngonium auritum* (L.) Schott	Cultivated	H	Marshy sciophyte
33.	*S. macrophyllum* Engl.	Cultivated	H	Marshy sciophyte
34.	*S. podophyllum* Schott	Cultivated	H	Marshy sciophyte
35.	*S. wendlandii* Schott	Cultivated	H	Marshy sciophyte
12. Genus: XANTHOSOMA Schott				
36.	*Xanthosoma robustum* Schott	Peta Ghati, Koraput, 2015, Cultivated	H	Marshy sciophyte
37.	*X. sagittifolium* (L.) Schott	Cultivated	H	Marshy sciophyte
6. Tribe: Colocasieae Brongn.				
13. Genus: ALOCASIA (Schott) G. Don (nom.cons.)				
38.	*Alocasia acuminata* Schott	Cultivated	H	Marshy sciophyte
39.	*A. augustiana* (L.) Linden & Rodigas	Cultivated	H	Marshy sciophyte
40.	*A. cucullata* (Lour.) G.Don	Cultivated	H	Marshy sciophyte
41.	*A. fornicata* (Kunth) Schott	Along streams under shade.	H	Marshy sciophyte
42.	*A. longiloba* Miq. [Syn. *Alocasia lowii* Hook.f.]	Cultivated	H	Marshy sciophyte
43.	*A. macrorrhizos* (L.) G. Don	In moist places close to water courses and also cultivated for tubers.	H	Helophyte
44.	*A. micholitziana* Sander	Cultivated	H	Marshy sciophyte
45.	*A. montana* (Roxb.) Schott	On rocky places of Barunei hill, Endangered	H	Marshy sciophyte
46.	*Alocasia* × *mortfontanensis* André	Cultivated	H	Marshy sciophyte
47.	*A. sanderiana* W. Bull	Cultivated	H	Marshy sciophyte
14. Genus: COLOCASIA Schott (nom. cons.)				
48.	*Colocasia esculenta* (L.) Schott	Common in damp, shady places, also cultivated.	H	Helophyte
**	*C. esculenta* cv ‘Aloha'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Black Beauty'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Black Coral'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Black Mable'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Black Magic'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Black Ripple'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Black Runner'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Blue Hawaii'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Coffee Cup'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Diamond Head'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Distant Memory'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Dragon Heart'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Heart of the Jungle'	Cultivated	H	Marshy sciophyte

**	*C. esculenta* cv 'Hilo Bay'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Illustris'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Mid Night'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Midori Sour'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Mojito'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Nancy's Revenge'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Pharaoh's Mask'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Pink China'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Red eye Gecko'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Royal Hawaiian Aloha'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Royal Hawaiian Black Coral'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Royal Hawaiian Punch'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Royal Hawaiian Maui Gold'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Surf City'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Thailand Giant'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Tropical Storm'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'White Lava'	Cultivated	H	Marshy sciophyte
**	*C. esculenta* cv 'Yellow Splash'	Cultivated	H	Marshy sciophyte
49.	*C. fallax* Schott	Cultivated	H	Marshy sciophyte
	15. Genus: LEUCOCASIA Schott			
50. #	*Leucocasia gigantea* (Blume) Schott	On the way to Panchpatmali hills, Damanjodi, Koraput	H	Marshy sciophyte
16. Genus: REMUSATIA Schott				
51.	*Remusatia vivipara* (Roxb.) Schott	Wild	H	Lithophyte
	17. Genus: STEUDNERA K. Koch			
52. #	*Steudnera colocasiifolia* K. Koch	Wild, Gonasika, near streams	H	Marshy hydrophyte
7. Tribe: Cryptocoryneae Bl.				
18. Genus: CRYPTOCORYNE Fisch. ex Wydler				
53.	*Cryptocoryne ciliata* (Roxb.) Schott	Bhitarkanika tidal forest	H	Marshy halophyte
54.	*Cryptocoryne retrospiralis* (Roxb.) Kunth	Usually in rivers and streams	H	Marshy hydrophyte
19. Genus: LAGENANDRA Dalzell				
**	*Lagenandra meeboldii* (Engler) C.E.C. Fischer cv 'Red hot'	Cultivated	H	Helophyte
55. #	*L. ovata* (L.) Thwaites	Wild, Katada village, Angul, canal side	H	Helophyte
56. #	*L. toxicaria* Dalzell	Wild, on the side of Gulmi Water fall, Kotpad, Koraput	H	Helophyte
57.	*Cercestis mirabilis* (N.E.Br.) Bogner	Cultivated	H. Cl.	Sciophyte and hemi epiphyte
58.	*Homalomena aromatica* (Spreng.) Schott	Cultivated	H	Sciophyte
59.	*H. rubescens* (Roxb.) Kunth	Cultivated	H	Sciophyte
8. Tribe: Philodendreae Schott				
2**0**.**Genus: PHILODENDRON** Schott				
60.	*Philodendron cordatum* Kunth ex Schott	Cultivated	H. Cl.	Sciophyte
61.	*P. elegans* Krause	Cultivated	H. Cl.	Sciophyte
62.	*P. erubescens* K. Koch & Augustin	Cultivated	H. Cl.	Sciophyte
63.	*P. fibraecataphyllum* M.M. Mora & Croat	Cultivated	H. Cl.	Sciophyte
64.	*P. giganteum* Schott	Cultivated	H. Cl.	Sciophyte
65.	*P. gloriosum* André	Cultivated	H. Cl.	Sciophyte
66.	*P. hastatum* K. Koch & Sello	Cultivated	H. Cl.	Sciophyte
**	*P. hastatum* cv 'Silver Sword'	Cultivated	H. Cl.	Sciophyte
67.	*P. hederaceum* (Jacq.) Schott	Cultivated	H. Cl.	Sciophyte
*	*P. hederaceum* (Jacq.) Schott var *hederaceum*	Cultivated	H. Cl.	Sciophyte
68.	*P. lacerum* (Jacq.) Schott	Cultivated	H. Cl.	Sciophyte
69.	*P. lupinum* E.G. Gonç. & J. B. Carvalho	Cultivated	H. Cl.	Sciophyte
70.	*P. mamei* André	Cultivated	H. Cl.	Sciophyte
71.	*P. melanochrysum* Linden & André	Cultivated	H. Cl.	Sciophyte
72.	*P. squamiferum* Poepp.	Cultivated	H. Cl.	Sciophyte
73.	*P. undulatum* Engl.	Cultivated	H. Cl.	Sciophyte
74.	*P. verrucosum* L. Mathieu ex Schott	Cultivated	H. Cl.	Sciophyte and hemi epiphyte
75.	*P. xanadu* Croat	Cultivated	H.	Sciophyte
21. **Genus: THAUMATOPHYLLUM** Schott				
76.	*Thaumatophyllum bipinnatifidum* (Schott ex Endl.) Sakur.,	Cultivated	H	Sciophyte

	Calazans & Mayo			
9. **Tribe: Pisteae** Rich. ex Lecoq & Juilet				
22. Genus: PISTIA L.				
77.	*Pistia stratiotes* L.	Common in ponds and stagnant water	H	Free floating hydrophyte
1**0**. **Tribe: Schismatoglottideae** Nakai				
	2**3**. **Genus: SCHISMATOGLOTTIS** Zoll. & Moritzi			
78.	*Schismatoglottis calyptrate* (Roxb.) Zoll. & Moritzi	Cultivated	H	Sciophyte
79.	*S. plurivenia* Alderw.	Cultivated	H	Sciophyte
80.	*S. scintillans* Scherber. & P.C. Boyce	Cultivated	H	Sciophyte
81.	*S. wallichii* Hook.f.	Cultivated	H	Sciophyte
11. **Tribe: Spathicarpeae** Schott				
24. **Genus: DIEFFENBACHIA** Schott				
82.	*Dieffenbachia amoena* Bull.	Cultivated	H	Sciophyte
83.	*D. bowmannii* Carrière	Cultivated	H	Sciophyte
84.	*D. longispatha* Engl. & K. Krause	Cultivated	H	Sciophyte
85.	*D. seguine* (Jacq.) Schott	Cultivated	H	Sciophyte
12. Tribe: Thomsonieae Bl.				
25. Genus: AMORPHOPHALLUS Bl. ex Decne.				
86.	*Amorphophallus bulbifer* (Roxb.) Bl.	Frequent in forest	H	Marshy sciophyte
87.	*A. commutatus* (Schott) Engl.	Kuldiha wild life sanctuary	H	Marshy sciophyte
88.	*A. margaritifer* (Roxb.) Kunth [Syn. *Plesmoniummar garitiferum* (Roxb.) Schott]	Common in open forest	H	Marshy sciophyte
89.	*A. paeoniifolius* (Dennst.) Nicolson	Common near villages and also cultivated	H	Marshy sciophyte
13. Tribe: Zantedeschieae Engl.				
2**6. Genus: ZANTEDESCHIA** Spreng.				
90.	*Zantedeschia aethiopica* (L.) Spreng.	Cultivated	H	Marshy hydrophyte
91.	*Z. elliottiana* (W. Watson) Engl.	Cultivated	H	Marshy hydrophyte
2. Sub-family: Lasioideae Engl.				
27. **Genus: LASIA** Lour.				
92.	*Lasia spinosa* (L.) Thw.	Along muddy streams under shade	H	Helophyte and Sciophyte
28. Genus: CYRTOSPERMA Griff.				
93.	*Cyrtosperma johnstonii* (W. Bull ex T. Moore & Mast.) N.E. Br.	Cultivated	H	Marshy hydrophyte
	29. **Genus: UROSPATHA** Schott			
94.	*Urospatha sagittifolia* (Rudge) Schott	Cultivated	H	Helophyte
3. Sub-family: Lemnoideae Schleid.				
30. **Genus: LEMNA** L.				
95.	*Lemna aequinoctialis* Welw.	Throughout Odisha	H	Free floating hydrophyte
96.	*L. gibba* L.	Throughout Odisha	H	Free floating hydrophyte
97.	*L. minor* L.	Throughout Odisha	H	Free floating hydrophyte
98.	*L. perpusilla* Torrey	Throughout Odisha	H	Free floating hydrophyte
99.	*L. trisulca* L.	Throughout Odisha	H	Free floating hydrophyte
31. **Genus: SPIRODELA** Schleid.				
100.	*Spirodela polyrhiza* (L.) Schleiden	Common in still waer bodies	H	Free floating hydrophyte
3**2**. **Genus: WOLFFIA** Horkel ex Schleiden (nom. cons.)				
101.	*Wolffia globosa* (Roxb.) Hartog & Plas	Bramhagiri, Puri	H	Free floating hydrophyte
4. Sub-family: **Monsteriodeae** Engl.				
1**4**.**Tribe: Monstereae** Engl.				
33. **Genus: EPIPREMNUM** Schott				
102.	*Epipremnum aureum* (Linden & Andre) G.S. Bunting [Syn. *Scindapsus aureus* (Linden & Andre) Engl.]	Throughout Odisha	Lianas	Sciophyte
**	*E. aureum* cv 'Golden'	Cultivated	Lianas	Sciophyte
**	*E. aureum* cv 'Jade'	Cultivated	Lianas	Sciophyte
**	*E. aureum* cv 'Manjula'	Cultivated	Lianas	Sciophyte
**	*E. aureum* cv 'Marble Queen'	Cultivated	Lianas	Sciophyte
**	*E. aureum* cv 'N Joy'	Cultivated	Lianas	Sciophyte

**	*E. aureum* cv 'Neon'	Cultivated	Lianas	Sciophyte
**	*E. aureum* cv 'Pearls & Jade'	Cultivated	Lianas	Sciophyte
**	*E. aureum* cv 'Snow Queen'	Cultivated	Lianas	Sciophyte
103.	*E. pinnatum* (L.) Engl.	Cultivated	Lianas	Sciophyte
**	*E. pinnatum* cv 'Cebu Blue'	Cultivated	Lianas	Sciophyte
**	*E. pinnatum* cv 'Variegata'	Cultivated	Lianas	Sciophyte
	34. **Genus: MONSTERA** Adans.			
104.	*Monstera adansonii* Schott	Cultivated	Lianas	Sciophyte
*	*M. adansonii* var *adansonii*	Cultivated	Lianas	Sciophyte
*	*M. adansonii* var *laniata*	Cultivated	Lianas	Sciophyte
105.	*Monstera deliciosa* Liebm.	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Aurea Variegata'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Borasigiana Albo Variegata'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Crème Brulee'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Electro Light'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Green on Green'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Green Snow'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Legacy'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Mint'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Platinum'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Thai Constellation'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Tricolor / Miracle'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'White lava'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'White Monster'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Yellow Marilyn'	Cultivated	Lianas	Sciophyte
**	*M. deliciosa* cv 'Yellow star'	Cultivated	Lianas	Sciophyte
106.	*M. dubia* (Kunth) Engl. & K. Krause	Cultivated	Lianas	Sciophyte
107.	*M. epipremnoides* Engl.	Cultivated	Lianas	Sciophyte
108.	*M. obliqua* Miq.	Cultivated	Lianas	Sciophyte
109.	*M. pinnatipartita* Schott	Cultivated	Lianas	Sciophyte
110.	*M. siltepecana* Matuda	Cultivated	Lianas	Sciophyte
111.	*M. standleyana* G.S. Bunting	Cultivated	Lianas	Sciophyte
112.	*M. subpinnata* (Schott) Engl.	Cultivated	Lianas	Sciophyte
	35. **Genus: RHAPHIDOPHORA** Hassk.			
113.	*Rhaphidophora decursiva* (Roxb.) Schott	Wild, Endangered	Lianas	Sciophyte
114.	*R. glauca* (Wall.) Schott	Wild	Lianas	Sciophyte
115.	*R. hookeri* Schott	Wild, Endangered	Lianas	Sciophyte
116.	*R. pertusa* (Roxb.) Schott	Cultivated	Lianas	Sciophyte
	36. **Genus: SCINDAPSUS** Schott			
117.	*Scindapsus officinalis* (Roxb.) Schott	Wild, Vulnerable	Lianas	Sciophyte
	15. **Tribe: Spathiphylleae** Engl.& Prantl.			
	37. **Genus: SPATHIPHYLLUM** Schott			
118.	*Spathiphyllum cannifolium* (Dryand. ex Sims) Schott	Cultivated	H	Sciophyte
119.	*S. cochlearispathum* (Liebm.) Engl.	Cultivated	H	Sciophyte
120.	*S. commutatum* Schott	Cultivated	H	Sciophyte
121.	*S. floribundum* (Linden & André) N.E. Br.	Cultivated	H	Sciophyte
122.	*S. phryniifolium* Schott	Cultivated	H	Sciophyte
123.	*S. wallisii* Regel	Cultivated	H	Sciophyte
	5. Sub-family: Orontioideae Mayo, Bogner & Boyce			
	38. **Genus: LYSICHITON** Schott			
124.	*Lysichiton americanus* Hultén & H.St. John	Cultivated	H	Marshy hydrophyte
125.	*Lysichiton* × *hortensis* J. D. Arm & B. W. Phillips	Cultivated	H	Marshy hydrophyte
	6. Sub-family: **Pothoideae** Engl.			
	16.Tribe: Anthurieae Engl.			
	39. Genus: ANTHURIUM Schott			
126.	*Anthurium andraeanum* Linden ex Andre	Cultivated	H	Sciophyte
127.	*A. antioquiense* Engl.	Cultivated	H	Sciophyte
128.	*A. clarinervium* Matuda	Cultivated	H	Sciophyte
129.	*A. crystallinum* Linden & André	Cultivated	H	Sciophyte
130.	*A. forgetii* N.E. Br.	Cultivated	H	Sciophyte
131.	*A. luxurians* Croat & R.N. Cirino	Cultivated	H	Sciophyte
132.	*A. papillilaminum* Croat	Cultivated	H	Sciophyte

133.	*A. plowmanii* Croat	Cultivated	H	Sciophyte
134.	*A. regale* Linden	Cultivated	H	Sciophyte
135.	*A. splendidum* W. Bull ex Rodigas	Cultivated	H	Sciophyte
136.	*A. schlechtendalii* Kunth	Cultivated	H	Sciophyte
137.	*A. superbum* Madison	Cultivated	H	Sciophyte
138.	*A. veitchii* Mast	Cultivated	H	Sciophyte
139.	*A. warocqueanum* T. Moore	Cultivated	H	Sciophyte
17. Tribe: Potheae Bartl.				
40. Genus: POTHOS L.				
140.	*Pothos scandens* L.	Wild and also frequently Cultivated	H. Cl.	Sciophyte and hemi epiphyte
**	*P. scandens* cv 'Carnival'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Cebu Blue'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Emerald'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Glacier'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Global Green'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Golden'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Hawaiin'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Jade'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Jessenia'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Manjula'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Marble Queen'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'N Joy'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Neon'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Pearl & Jade'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Satin'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Shangri La'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Snow Queen'	Cultivated	H. Cl.	Sciophyte
**	*P. scandens* cv 'Variegated Queen'	Cultivated	H. Cl.	Sciophyte
7. Sub-family: Zamioculadoideae Bog. & Hess.				
41. Genus: ZAMIOCULCAS Schott				
141.	*Zamioculcas zamiifolia* (G. Lodd.) Engl.	Cultivated	Succulent Shrub	Sciophyte

A total of eight subfamilies are recognized worldwide which often have unique distributions at least partly ditected by their morphology. They are namely Aroideae, Gymnostachydoideae, Lasioideae, Lemnoideae, Monsteroid eae, Orontioideae, Pothoideae, Zamioculcadoideae. Out of which Odisha state is represented by 7 subfamilies (except Gymnostachydoideae).

Aroideae is the largest subfamily in Araceae and consists of about 72 different genera, 25 tribe and 2,300 species [10]. Here also in Odishan context it is the largest subfamily that is represented by 13 tribe, 26 genera and 91 species. Lasioideae is the subfamily that includes ten numbers of living genera namely *Anaphyllopsis*, *Anaphyllum*, *Cyrtosperma*, *Dracontioides*, *Dracontium*, *Lasia*, *Lasimorpha*, *Podolasia*, *Pycnospatha* and *Urospatha*; one extinct genus *Keratospema* described from *Ypresian* fossils recovered at the *Eocene Okanagan Highlands Princeton Chert* site and 71 species [11]. The state is represented by only 3 genera and 3 species. Lemnoideae is a subfamily of aquatic flowering plants that floats on or just beneath the surface of still or slow-moving bodies of fresh water and wetlands commonly known as bay root [12]. These plants have a simple structure, lacking an obvious stem or leaves. The greater part of each plant is a small organized "thallus" or "frond" structure-only a few cells thick, often with air pockets (aerenchyma) that allow it to float on or just under the water surface. Depending on the species, each plant may have no root or may have one or more simple rootlets. It includes 4 genera and 38 species. The state of Odisha is represented by 3 genera and 7 species.

Monsteroideae subfamily consists of 12 genera, 4 tribe and 411 species. The state is represented by 2 tribe, 5 genera 22 species. Pothoideae commonly called the true aroids comprises of 2 tribes, 3 genera and 1422 species. The state is represented by 2 tribes 2 genera and 15 species. Orontioideae consists of three genera which includes *Lysichiton, Orontium* and *Symplocarpus* with 9 species. The state is represented by 1 genus and 2 species. Zamioculcadoideae consists of three genera such as *Zamioculcas,* Gonatopus and *Stylochaeton* with 28 species. The state is represented by only 1 genus and 1 species.

The updated checklist presented below includes 141 numbers of Araceaeous species documented from the state of Odisha. The above number of species belongs to 7 subfamilies, 17 tribes and 41 genera. A total of 166 cultivars are recorded out of which *Caladium* having 76, followed by *Colocasia* (32), *Pothos* (18), *Monstera* (15), *Epipremnum* (10), *Arisaema* (9), *Aglaonema* (4), *Arum* and *Philodendron* having 1 number of each (Fig. 1, Table 1). The study also represented 2 ssp. and 5 varieties. Among the different genera *Arisaema* (17) and *Philodendron* (16) had the largest number of species followed by *Alocasia* (10), *Monstera* (9), *Aglaonema*, *Anthurium* and *Spathiphyllum* (6 each), *Amorphophallus*, *Dieffenbachia*, *Rhaphidophora*, *Schismatoglottis* and *Syngonium* harboured 4 species each respectively (Fig. 2, Table 1). The current species scenario of Araceae reveals that the state of Odisha is represented by

141 number of species that is only 3% of the global species (4392 species) (Fig. 3, Table 1). Similarly, genera-wise composition states that 41 number of genera are found in the State that is only 22% (41) of the global genera which is represented by 78% (147 numbers) (Fig. 4, Table 1). Tribe comparison between the study area and global scenario states that 35% (17) of the tribe present in the state whereas 65% (32) of the tribe occurs worldwide (Fig. 5, Table 1).

So far as the habitat concerned among 314 number of plants 8 Free-floating hydrophyte, 7 Helophyte, 1 Helophyte and Sciophyte, 3 Hemi epiphyte, 3 Lithophyte, 1 Marshy halophyte, 8 Marshy hydrophyte, 172 Marshy sciophyte, 1 Marshy sciophyte and lithophyte, 113 Sciophyte, 3 Sciophyte and hemi epiphyte are observed from the study area (Fig. 6, Table 1).

Habit-wise distribution also shows that 233 number of herbaceous plants followed by 43 lianas or woody climbers, 37 herbaceous climbers and 1 succulent shrub are recorded from the state (Fig. 7, Table 1).

Occurrence of the species indicates that 33 number of plants are observed under native or wild condition while rest of the 281 plants are recorded under cultivated condition from different nurseries, botanical gardens of industrial houses, school and colleges of the state (Fig. 8, Table 1).

A review of previously published literature revealed a total of 28 aroid species reported from Odisha [9], but the present compiled data reports that currently there are 141 number of species in the family Araceae that is a very big number. It clearly expresses that during 30 years the number of species in the study area is gradually increasing. A comparison between the two data significantly discloses that previously (in the year 1996) 17% of the plant species were present and now it is 83%. (Fig. 9, Table 1). During the course of time the number will gradually increase which is a good sign for our germplasm diversity but on the other hand this immigration effect may cause serious hazardous effect like invasive alien species. Through additional fieldwork conducted during the present study, we recorded four species as new occurrences for the state namely *Lagenandra ovata* (L.) Thwaites (Plate-1A, B), *Lagenandra toxicaria* Dalzell (Plate-1 C, D), *Steudnera colocasiifolia* K. Koch. (Plate-1 E, F), and *Xanthosoma robustum* Schott (Plate-1 G, H).

According to Botanical Survey of India four number of plants are coming under Red-list category i.e. *Alocasia montana* (Roxb.) Schott, *Lagenandra meeboldii* (Engler) C.E.C. Fischer, *Theriophonum fischeri* Sivad. are in the threatened list, while *Scindapsus officinalis* (Roxb.) Schott is declared to be vulnerable for the state of Odisha [13]. Necessary action and precaution must be taken for the above-mentioned plant for their preservation and future use.

Results of the present study also indicated that this list represents a synthesis of data from existing literature combined with the findings of the current field investigation. Detailed information on the newly recorded species is provided in subsequent sections. In the checklist, species marked with an asterisk (*) denote varieties, (**) represents cultivar, (***) indicates subspecies while those marked with a hash (#) indicate species that are new records means observed for first time in the state.

ENUMERATION OF THE FOUR NEWLY RECORDED TAXA

Lagenandra ovata (L.) Thwaites Enum. Pl. Zeyl. 334.1864.

Habit: Perennial, rhizomatous, marsh herb, often submerged or emergent; rhizomes creeping, stout, 1–2 cm diam., clothed in fibrous leaf bases. **Habitat:** Helophytes, rarely rheophytes, with thick creeping rhizome. **Leaves:** distichous, ascending; petiole 10–30 cm long, terete or slightly flattened; sheath present, membranous, extending 1/3 to 1/2 of petiole length. **Lamina:** ovate to broadly ovate, 7–20 × 4–12 cm, base rounded to subcordate, apex acute to shortly acuminate, margins entire, dark green, often purple-tinged beneath; midrib prominent below, secondary veins pinnate, faint. **Inflorescence:** solitary, enclosed in a spathe. **Peduncle**: short, often less than 5 cm, erect. Spathe 5–10 cm long, tubular at base, limb ovate-lanceolate, acuminate, green to purplish, sometimes with reddish margins. **Spadix:** shorter than spathe, 4–8 cm, sessile. **Flowers:** unisexual, female flowers at base, male above, separated by a short sterile zone. **Androecium:** male flowers with 4–6 stamens, fused into synandria; thecae lateral. **Gynoecium:** ovary ovoid, 1-locular, with basal placentation; stigmas sessile, discoid. **Fruit:** a fleshy berry, globose to ovoid, green to reddish when mature. **Seeds:** few, oblong with copious endosperm.

Flowering & Fruiting: February-May

Specimen examined: Kashipur forest region, 18°.81’ 764’’ N, 82°.71’ 487’’E**,** 25.8.2015, RM-15-UU-845, 898 meters above sea level, Koraput, Odisha.

Distribution: In India Goa, Kerala, Karnataka Maharashtra and Tamil Nadu as well as also in Srilanka.

Lagenandra toxicaria Dalzell, Hooker’s J. Bot. Kew Gard. Misc. 4: 289 1852.

Habit: Rhizomatous creeping procumbent or erect evergreen herbs; rhizome ca. 5 cm diameter. **Habitat:** Found along streams, in marshes; often submerged during monsoon period. **Leaves:** 30-40 × 10-15 cm, oblong-acuminate, venation pinnately parallel, venation involute; petiole cylindrical ca. 39-47 cm long, 0.4-1.2 cm diameter, basally sheathing for ca. 7-9 cm. **Inflorescence:** with a short peduncle of ca. 2.5 cm long. **Spathe** ca. 12-16 cm long, divisible into a basal tubular portion, a middle broad limb and a terminal tapering caudate portion; light prasinus-roseus or roso-gilvus in colour, outer surface leioic; tube ca. 2.5 cm long, 1.3 cm diameter, purpureus with darker vertical ridges inside; limb ca. 4 cm long, 1.8 cm diameter, slightly laterally compressed with closely and irregularly oriented, dark purpureus, light-tipped densely fimbriate ridges; terminal caudation about 5 cm long. **Spadix:** pumilus, ca. 1.7 cm long with basal pistillate portion followed by a slender barren interstice of ca. 3 mm long, a staminate portion, and terminating into a short barren appendix. Pistillate flowers ca. 65-80, closely oriented forming a subglobose or subcylindric mass, each flower ca. 2.2 mm high, 1 mm diameter, more or less truncate, muricate on outside on the upper half. **Gynoecium:** ovary unilocular with tetra-hepta orthotropous ovules and unicellular placental trichomes; stigma sessile, hexagonal with slightly elevated central portion. Few pumilus, candid, clavate, olfactory granules or neuter flowers present just above the

pistillate portion around the base of the interstice and sometimes one or two on the interstice below the staminate portion. Staminate portion more or less conoid-spherical and with ca. 170-200 sessile staminate flowers, each flower ca. 0.6 mm high, each theca with a short apical cornute tube through which pollen grains liberate out. **Spadix**: appendix ca. 0.6 mm, broadly conical with apical tapering pointed tip by which the spadix is attached to the roof of the tube. **Fruit:** a more or less fleshy capsule; dehiscence by 3-4 longitudinal splits from the base upwards at maturity. **Seeds** ca. 1.6 mm long, ovoid-ellipsoid, slightly bent, longitudinally ridged.

Flowering and fruiting: Throughout the year.

Specimen Examined: Dudhari, 18°.73'345'' N & 82°.70'595'' E**,** 12.7.2015, RM-15-UU-976, 1345 m from sea level near pasama pond, Similiguda, Koraput, Odisha.

Distribution: It was previously reported from Goa, Maharashtra, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh in moist semi-evergreen forest zones, elevations approx. 350-1200m

Steudnera colocasiifolia K. Koch Wochenschr. Gärtnerei Pflanzenk. 1862: 114.1862.
Habit: An evergreen subshrub to medium-sized robust herb**.** **Habitat:** Dense forests, wet meadows, by streams **Stem:** short, rhizomatous, epigeal, poisonous, creeping and ascending, erect in the first stage of the life and later become decumbent, 22–48 cm in length, 1.4–2.5 cm in diam., scarcely ensheathed with tattered, phaeoic and non-netted cataphylls and leaf remains while their older portions become naked. **Leaves:** solitary, but are together at the shoot tips, 14–28 cm in length and 7–19 cm in width, leaf blades peltate to ovate or obovate, subcoriaeous and concolorous. Base of the leaves retuse and apex acuminate-acute, hyalinous, adaxial surface glaucous and pale viridis in colour, while abaxial surface paler green with purple suffusion, veins pale prasinus. **Petioles:** slender, cylindrical, terete, pale green in colour, 15–25 cm length and 3–5 mm in diam. but can grow up to 30–50 cm long, petiolar sheaths are very short. **Peduncle:** green or violet, much shorter than petioles, 8-15 cm. **Spadix**: 3–7 cm length and 4–7 mm in diam. lacks appendices and are much shorter than the spathes. **Spathe:** broadly ovate-lanceolate, long caudate-acuminate, and reflex on opening. 10–18 cm length and 5–10 cm diam., upper portions of the spathes wither soon and are marcescence, while lower portions are persistent into fruiting, concolorous and chrysocolorous without dark purple colour within, limbs are externally dull phaeo-luteus, with suffused dull rutilus and are internally dull flavid, with the red colour suffusing much of the spathe, base of the spathes is rubro-purureus internally and somewhat prasino-russus externally. This type of coloration gives the whole spathe a dull aurantiate appearance. **Male zones:** ellipsoid, obtuse, usually 1–1.7 cm long and 4–6 mm in diam., stamens connate, cylindrical, oblong. eboreus (ivory colour), anthers 5-7, synandria are 1–2×1.4–2.5 mm in dimension, 4–6 androeciums and are little bit rounded, stellate-polygonal. **Female zones:** cylindric and creamy candid in colour, 2–2.7 cm long, about three-fourth of the length is dorsally adnate to the spathe, ovaries sub-globose and penta-loculate with many ovules, 2–3 × 0.5–1 mm in dimension, encircled by a whorl of 5–8 clavate staminodes, styles short, stigmata have 3–5 ascending lobes each, lobes are blunt and do not exceed the style. **Fruits:** berry with many seeds.

Flowering & Fruiting: Mar-Apr.

Specimen Examined: Tayaput, 18°.81'. 882'' N & 82°.71'. 567'' E, 27.6.2015, RM-15-UU-995, about898 meters above mean sea level, Dense forested areas of Koraput, Odisha.

Distribution: Northeast India (Assam), Bangladesh, Cambodia, South Central and Southeast China, Laos, Myanmar, Thailand, and Vietnam**.**

Xanthosoma robustum Schott Oesterr. Bot. Wochenbl. 3: 370.1853.
Habit: An evergreen sub-shrub to medium-sized robust herb**.**
Habitat: Dense forests, wet meadows by streams **Stem:** aerial, erect, arborescent, up to 1 m tall; with few roots. **Leaves:** simple, broadly ovate-triangular, ca. 50–100 × 48–100 cm, abruptly acuminate at the apex, cordate or deltate and more or less sagittate at the base (the basal lobes quadrate), glaucous or candid beneath, slender, basal lobes with the posterior rib at an angle of 45 to the main vein and with ca 7-9 secondary veins directed basally and ca 5 directed apically, posterior rib naked for ca. 1–7 cm. obtuse sinus at the apex, primary lateral veins in ca 10 pairs, fused into a prominent collective vein; petioles up to 70-120 cm long, sheathed halfway or more, spongy, subterete above the sheath. Inflorescences 1 to many per axil, peduncle up to 10-50 cm long. **Inflorescence:** Spathe, 12-28 cm long, the tube green outside, dark purple inside, the blade up to 20 cm long, white. **Spadix** 10-25 cm long; 1–1.5 cm wide, pistillate portion ca 3 cm long, purple; fertile staminate portion candid-gilvus, 7-17 cm long, the sterile portion 2-4 cm long, leucoish to roseus. **Fruit:** Yellowish

Flowering & Fruiting: June – September & August – November

Specimen Examined: Deomali hill range,18°40′325″ N, 82°58′545″ E, 12.9.2015, RM-15-UU-923, about1025 meters above mean sea level, Koraput, Odisha.

Distribution: Central America **-** Belize**,** Guatemala**,** Honduras**,** Nicaragua**,** Costa Rica**.**

Plate-1

[A: **Lagenandra ovata** (L.) Thwaites, B: **L. ovata** with its inflorescence, C: **Lagenandra toxicaria** Dalzell, D: **L. toxicaria** with its inflorescence, E: **Steudnera colocasiifolia** K. Koch, F: **S. colocasiifolia** with its inflorescence, G: **Xanthosoma robustum** Schott, H: **X. robustum** with its inflorescence]

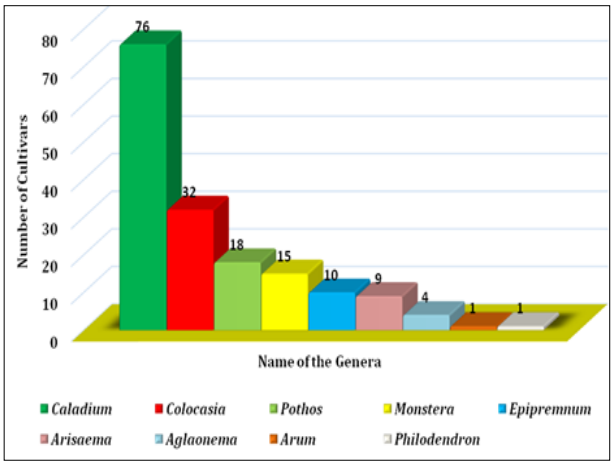

Fig 1: Genera-wise distribution of cultivars in the study area

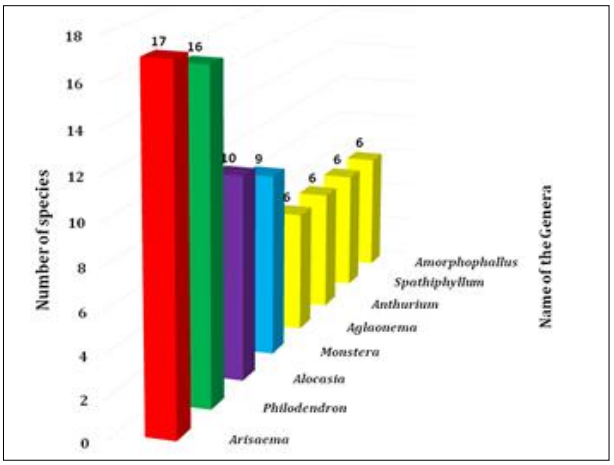

Fig 2: Dominant Genera of Araceae in the Study Area

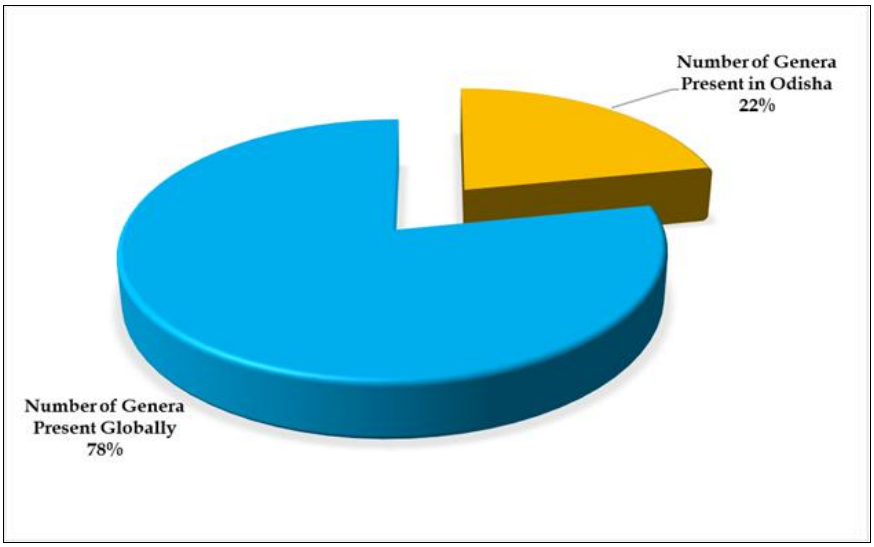

Fig 3: A comparison of species scenario between the state of Odisha versus world

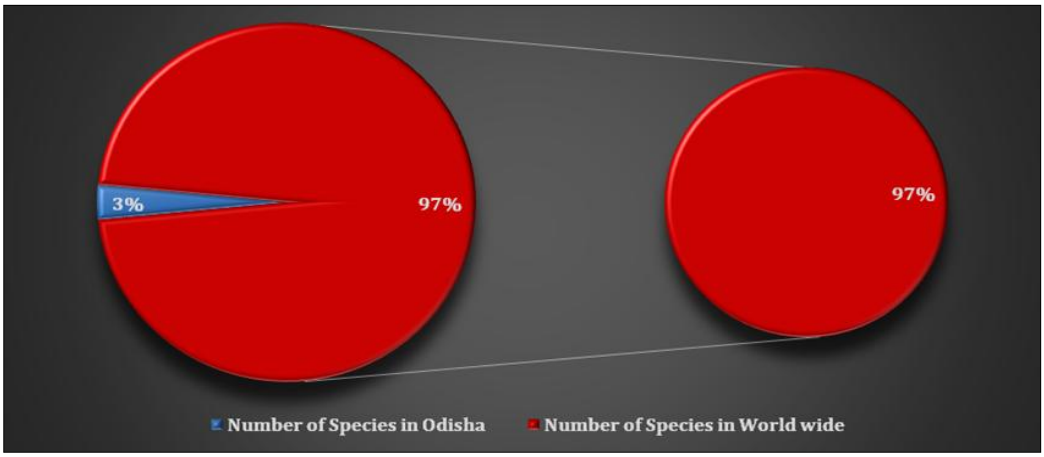

Fig 4: A comparison between the Araceous genera found in the state of Odisha and across the Globe

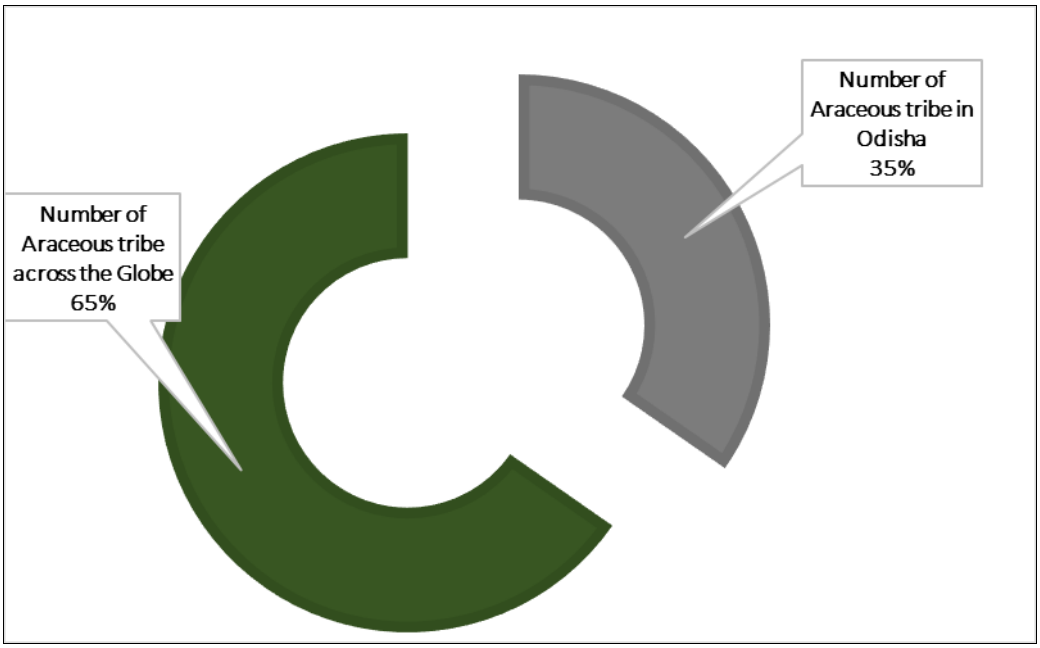

Fig 5: A comparison between Araceous tribes present in the State of Odisha and across the Globe

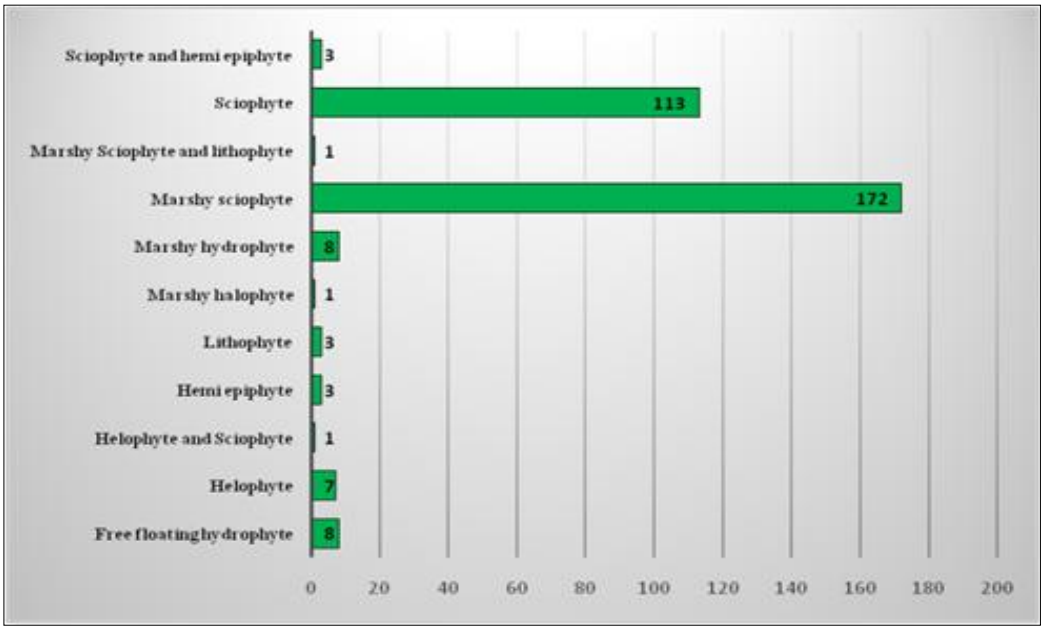

Fig 6: Habitat-wise distribution of plant species in the study area

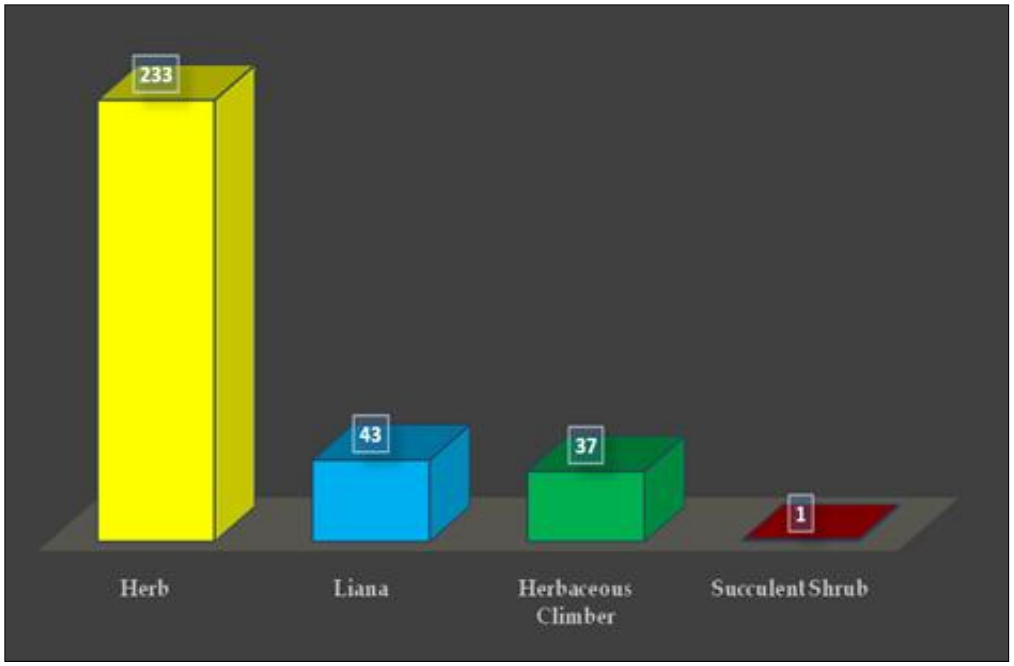

Fig 7: Habit-wise distribution of plant species in the study area

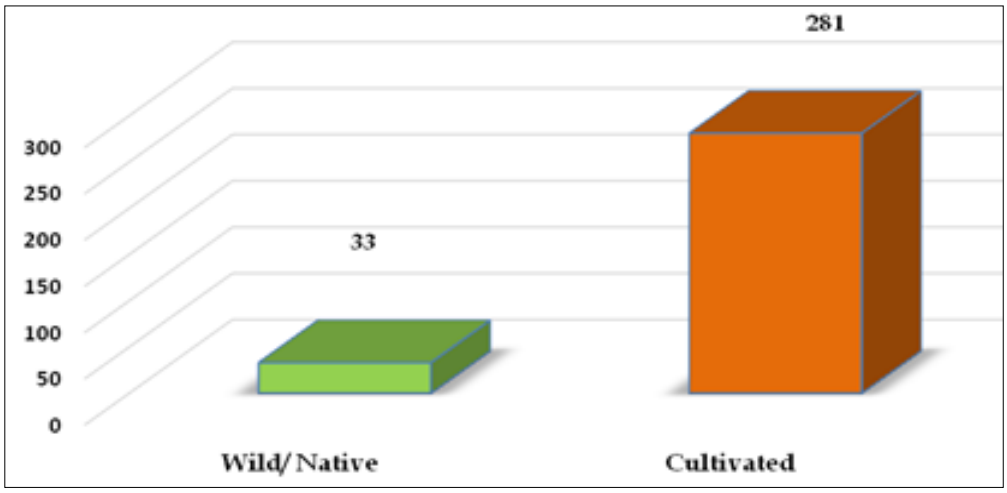

Fig 8: Occurrence-wise distribution of plant species in the study area

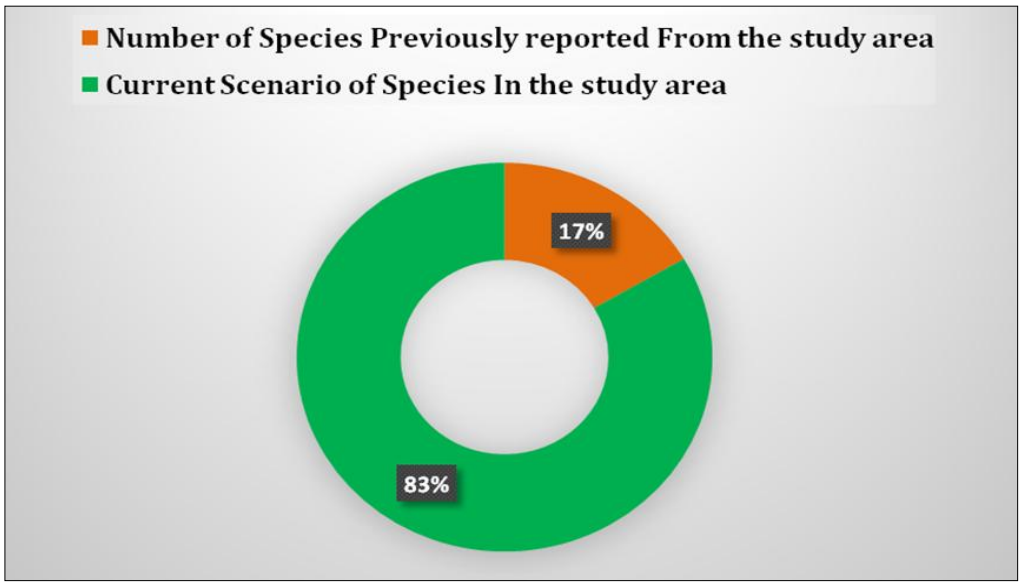

Fig 9: A comparison between the numbers of species recorded earlier and in the current study

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