



Diversity of angiosperms and their conservation status in Biharinath Hill, Bankura, West Bengal, India

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Abstract:

The present study enlists the major angiosperm flora of Biharinath hill. The conservation status of the angiosperm taxa is also mentioned providing IUCN Red List categories. This work was shaped by the collection, documentation, description and identification of the taxa followed by checking of accepted names and IUCN categories of the identified taxa. We reported 85 species under 81 genera of 35 angiosperm families. The family Fabaceae was the largest in species composition.

Key words: Angiosperm, Conservation status, Biharinath Hill, Bankura.

1. Introduction

We are stepping towards the sixth mass extinction. The rapid and alarming biodiversity loss in this era indicates the beginning of another mass extinction. The whole living world in that sense is threatened by a series of factors such as overexploitation, invasion by invasive species, pollution, climate change, industrialization, urbanization, habitat loss and fragmentation [17].

Enlisting with proper documentation of threatened species according to IUCN categories is the most powerful tool for identifying their present status and range of distribution as well as for planning their habitat restoration with special attention to the vulnerable and endangered species [13]. So, species confined to a particular area need to be explored periodically to check their status [14]. Worldwide the total number of angiosperms accounts for around 2.5 lakhs, among which about 15000-17000 angiosperm are present in India [3]. Being a divergent nation, India provides a vast scope to study angiosperm diversity along with other aspects of their taxonomical study. The study of flowering plants is easier on plains as compared

to the hills [3].

A study on biodiversity alone is not sufficient to understand the ecosystem of an area. Further study on the conservation status of the species can show the balance of the ecosystem which is more important in the present context.

There is an imperative need felt to explore such a vegetation-rich area of Biharinath Hill. Detecting the lacunae and invigorating the studies of angiosperms in different aspects as much as possible are the tasks of the taxonomists [13].

2. Materials and methods

Study area

Biharinath hills lie between 23.56° N latitude and 86.95° E longitude. The hill is about 451 meters (1480 ft) in height. It is about 60 km away from the North-west of Bankura town and 14 km away from the North-East of Saltora town. Biharinath hill is considered the tallest hill in the district of Bankura and is also a witness of old Jain culture. It is one of the dense forest areas of the district and is also a part of the Eastern Ghats. The hill shows different looks seasonally.

During monsoon, it covers with green overgrown vegetation from all sides representing the verdant carpet that is laid on the overall hill from peak to foothill. The hill is enriched with both floral and faunal diversity and the main attractiveness of the region is the impressive tribal culture of foothill villages (Fig.1).

Sample collection method and identification

The plant specimens were collected during their flowering and fruiting period from different regions of the Biharinath hills of the Bankura district. A few field surveys have been carried out from January 2022 to November 2022. For

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identification of the plant specimen, authentic literature and standard method has been consulted [1-2, 4-12, 15-16, 18-22, 24-32]. Accepted names of the plant species have been verified by POWO [23]. Collected plant specimens were wrapped in alternating layers of newspaper until the plant specimens were completely dried. AS denotes the name of the second author (Anjali Sahis) for the present work. After drying, plant specimens were mounted on herbarium sheets for preservation in the herbarium, Department of Botany, S. K. B. University, Purulia.

3. Results and discussion

The present study was undertaken to carry out an extensive survey of angiosperms diversity in Biharinath hill, Bankura district, which revealed the documentation of 81 genera of angiosperms belonging to 35 families. The study recorded the habits of the collected angiosperms among which 35 species were herbs, 15 species were shrubs and 28 species were Trees (Table 1). Though climber and lianas species were difficult to find, *Cajanus scarabaeoides*, *Cardiospermum halicacabum*, *Hemidesmus indicus*, *Melothria pendula*, and *Mikania micrantha* were found as a climber as well as *Bougainvillea spectabilis* and *ventilago denticulata* also found which were belongs to lianas (Fig.2).

Fabaceae was the most prevalent family with 11 genera which are displayed in Fig.3.

The present investigation also discloses the conservation status of observed angiosperms according to IUCN categories and the India biodiversity portal (Table 2). Due to a lack of available secondary data, the conservation status of other collected species was not provided. Out of the total 85 species, 37 species belong under the 'Least Concerned'(LC) category whereas eight species are under the 'Not Evaluated'(NE) category. *Mangifera indica* is under the 'Data Deficient' (DD) whereas *Cleistanthus collinus* and *Gossypium hirsutum* are 'Vulnerable'(VU) categories(Fig.4).

4. Conclusions

A total of 938 spp. of angiosperms belonging to 575 genera under 139 families have been reported by Sanyal (1994) from the entire district of Bankura in his book 'Flora of Bankura

District' West Bengal. He also included an additional 31 spp of angiosperms in the appendix of his book. Among the total 938 spp of angiosperms only 13 spp viz. *Grewia hirsuta* Vahl, *Dendro*

lobium triangulare (Retz.)Schindl., *Senegalia chundra* (Roxb. ex Rottler) Maslin, *Flemingia bracteata* (Roxb.) Wight, *Rhynchosia rufescens* (Willd.)DC. *Ficus hispida* L., *Jasminum cuspidatum* Rottler *Nicotoba betonica* (L.) Lindau, *Lantana camara* L., *Persicaria glabra* (Willd.)M.Gomez , *Cyperus pangorei* Rottb., *Aphuda mutica* L. and *Cymbopogon martini* (Roxb.)W. Watson was reported from Biharinath hill. The species have not been seen by the present authors in Biharinath hill or in the neighboring areas.

After comparison with the previous work (Sanyal, 1994) it has been concluded that all the species (except *Lantana camara* L. and *Ficus hispida* L.f.) reported from Biharinath Hill of Bankura district by present authors seem to be novel.

The present study plays a vital role in gaining the awareness of local people for the conservation of biodiversity as a great natural resource. For the present study, we have collected various plants like *Ailanthus excelsa*, *Breynia retusa*, *Hemidesmus indicus*, *Flacourtia indica*, *Cephalanthus occidentalis*, *Holarrhena pubescens*, *Simarouba glauca*, *Vallesia glabra* and *Ventilago denticulata* are located from diverse locations in the entire area of Biharinath hill. Most of the plant species of this hill are economically important, some with their potential medicinal values.

The present study has shown that Biharinath hill is rich in angiosperms diversity as well as in ethnobotanical resources along with tribal people. There is tremendous scope for the conservation of biodiversity to revive the execution of one of the topmost global concerns. The present conservation status according to IUCN categories reveals that 37 species are LC, and two species are V. But a large number of species were not evaluated yet.

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Table 1. List of plant species identified from Biharinath hill, Bankura district.

| Sl. No | Scientific names of the species and collection numbers | Family | Vernacular name | Habit and dates of collection |
|--------|--|----------------|-----------------|-------------------------------|
| 1 | <i>Acacia auriculiformis</i> A. Cunn. Ex Benth. 01 | Fabaceae | Akashmoni | T, 20.03.22 |
| 2 | <i>Aegle marmelos</i> (L.) Correa AS-52 | Rutaceae | Bel | T, 05.11.22 |
| 3 | <i>Ailanthus excelsa</i> Roxb. AS-39 | Simaroubaceae | Mahanim | T, 20.03.22 |
| 4 | <i>Alstonia scholaris</i> (L.) R.Br. 02 | Apocynaceae | Chhatim | T, 20.03.22 |
| 5 | <i>Alternanthera sessilis</i> (L.) R.Br. ex DC. 53 | Amaranthaceae | Mati konduri | H, 09.05.22 |
| 6 | <i>Andrographis paniculata</i> (Burm.f.) Nees AS-59 | Acanthaceae | Kalmegh | H, 05.11.22 |
| 7 | <i>Anisomeles indica</i> (L.) Kuntze 03 | Lamiaceae | Apang | H, 20.03.22 |
| 8 | <i>Annona squamosa</i> L. 04 | Annonaceae | Ata, Madal | T, 20.03.22 |
| 9 | <i>Argemone mexicana</i> L. 05 | Papaveraceae | Sheyal kata | H, 20.03.22 |
| 10 | <i>Azadirachta indica</i> A. Juss. 06 | Meliaceae | Neem | T, 20.03.22 |
| 11 | <i>Bauhinia purpurea</i> L. AS-62 | Fabaceae | Kanchan | T, 05.11.22 |
| 12 | <i>Blumea lacera</i> (Burm.f.) DC .07 | Asteraceae | Kakshima | H, 20.03.22 |
| 13 | <i>Borassus flabellifer</i> L. AS-40 | Arecaceae | Tal | T, 20.03.22 |
| 14 | <i>Bougainvillea spectabilis</i> Willd. AS-41 | Nyctaginaceae | Kagoj phool | L, 20.03.22 |
| 15 | <i>Breynia retusa</i> (Dennst.)Alston 08 | Phyllanthaceae | Kambhi | S, 20.03.22 |
| 16 | <i>Bridelia micrantha</i> (Hochst.)Baill. 09 | Phyllanthaceae | Mitseeri | T, 20.03.22 |
| 17 | <i>Butea monosperma</i> (Lam.) Kuntze AS-42 | Fabaceae | Palash | T, 20.03.22 |
| 18 | <i>Cajanus scarabaeoides</i> (L.) Thouars AS-57 | Fabaceae | Catjang | C, 05.11.22 |
| 19 | <i>Calotropis procera</i> (Aiton) W.T. Aiton AS-43 | Apocynaceae | Akanda | S, 20.03.22 |
| 20 | <i>Cardiospermum halicacabum</i> L. AS- 64 | Sapindaceae | Balloon vine | C, 05.11.22 |

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| | | | | |
|----|---|----------------|-------------------|-------------|
| 21 | <i>Carissa spinarum</i> L. 10 | Apocynaceae | Kawromcha | S, 20.03.22 |
| 22 | <i>Casearia sylvestris</i> Sw. 11 | Salicaceae | Wild sage | T, 20.03.22 |
| 23 | <i>Casuarina equisetifolia</i> L. 12 | Casuarinaceae | Jhau | T, 09.05.22 |
| 24 | <i>Cephalanthus occidentalis</i> L. 13 | Rubiaceae | Botam Bush | T, 09.05.22 |
| 25 | <i>Chromolaena odorata</i> (L.) R.M. King & H. Rob. 42 | Asteraceae | Gundhury | H, 09.05.22 |
| 26 | <i>Cleistanthus collinus</i> (Roxb.) Benth. ex Hook.f. 14 | Phyllanthaceae | Kargalli | H, 09.05.22 |
| 27 | <i>Clerodendrum infortunatum</i> L. 15 | Lamiaceae | Ghetu | S, 09.05.22 |
| 28 | <i>Clerodendrum trichotomum</i> Thunb. 16 | Lamiaceae | Ghetu | H, 09.05.22 |
| 29 | <i>Crotalaria pallida</i> Aiton. 17 | Fabaceae | BoroJhunjhunia | H, 09.05.22 |
| 30 | <i>Croton bonplandianus</i> Baill. 18 | Euphorbiaceae | Bon Tulsi | H, 09.05.22 |
| 31 | <i>Cyanthillium cinereum</i> (L.) H. Rob. 19 | Asteraceae | Kukshima | H, 09.05.22 |
| 32 | <i>Dalbergia sissoo</i> Roxb.ex DC. AS-18 | Fabaceae | Sisso | T, 20.03.22 |
| 33 | <i>Elephantopus elatus</i> Bertol. AS-66 | Asteraceae | Elephant's foot | H, 05.11.22 |
| 34 | <i>Erigeron bonariensis</i> L. 44 | Asteraceae | Hairy Flebane | H, 09.05.22 |
| 35 | <i>Ficus benghalensis</i> L. AS-44 | Moraceae | Bat | T, 20.03.22 |
| 36 | <i>Ficus hispida</i> L.f. AS-54 | Moraceae | Dumur | S, 05.11.22 |
| 37 | <i>Flacourtia indica</i> (Burm.f.) Merr. 21 | Salicaceae | Boinchi | T, 09.05.22 |
| 38 | <i>Gamochaeta purpurea</i> (L.) Cabrera 22 | Asteraceae | Begunichirantan | H, 09.05.22 |
| 39 | <i>Glycosmis pentaphylla</i> (Retz.) DC. AS-65 | Rutaceae | Ashhoura | S, 05.11.22 |
| 40 | <i>Gomphrena serrata</i> L. 23 | Amaranthaceae | Todo | H, 09.05.22 |
| 41 | <i>Gossypium hirsutum</i> L. AS-55 | Malvaceae | Tula | H, 05.11.22 |
| 42 | <i>Grewia multiflora</i> Juss. AS-56 | Malvaceae | Panisara | T, 05.11.22 |
| 43 | <i>Hemidesmus indicus</i> (L.)R. Br. 25 | Apocynaceae | Anantamul | C, 09.05.22 |
| 44 | <i>Hibiscus rosa-sinensis</i> L. AS-45 | Malvaceae | Jaba | T, 20.03.22 |
| 45 | <i>Holarrhena pubescens</i> Wall. ex G. Don 26 | Apocynaceae | Kurchi | T, 09.05.22 |
| 46 | <i>Hygrophila auriculata</i> (Schumach.) Heine AS-26 | Acanthaceae | Kulekhara | H, 20.03.22 |
| 47 | <i>Ipomoea carnea</i> Jacq. AS-46 | Convolvulaceae | Berakolmi | S, 20.03.22 |
| 48 | <i>Jatropha gossypifolia</i> L. 27 | Euphorbiaceae | Lal verenda | S, 09.05.22 |
| 49 | <i>Lantana camara</i> L. 28 | Verbenaceae | Kutus | S, 09.05.22 |
| 50 | <i>Mallotus repandus</i> (Rottler) Mull. Arg. AS-53 | Euphorbiaceae | Donkar | S, 05.11.22 |
| 51 | <i>Mangifera indica</i> L. AS-47 | Anacardiaceae | Aam | T, 20.03.22 |
| 52 | <i>Mecardonia procumbens</i> (Mill.)Small 29 | Plantaginaceae | Mikardon | H, 09.05.22 |
| 53 | <i>Melothria pendula</i> L. AS-68 | Cucurbitaceae | Creeping cucumber | C, 05.11.22 |
| 54 | <i>Mikania micrantha</i> Kunth AS-67 | Asteraceae | Bitter vine | C, 05.11.22 |
| 55 | <i>Mimosa pudica</i> L. 30 | Fabaceae | Lojjaboti | H, 09.05.22 |
| 56 | <i>Monoon longifolium</i> (Sonn.)B. Xue & R. M. K. Saunders AS-48 | Annonaceae | Debdaru | T, 20.03.22 |
| 57 | <i>Ocimum basilicum</i> L. 31 | Lamiaceae | Tulshi | H, 09.05.22 |
| 58 | <i>Ocimum tenuiflorum</i> L. 32. | Lamiaceae | Tulshi | H, 09.05.22 |

| | | | | |
|----|--|-----------------|------------------------|-------------|
| 59 | <i>Opuntia dillenii</i> (KerGawl.)Haw.AS49 | Cactaceae | Foni Mansa | H, 20.03.22 |
| 60 | <i>Parthenium hysterophorus</i> L. 33 | Asteraceae | Gajor Ghass Phool | H, 09.05.22 |
| 61 | <i>Phoenix sylvestris</i> (L.)Roxb. AS-50 | Arecaceae | Khejur | T, 20.03.22 |
| 62 | <i>Pongamia pinnata</i> (L.)Pierre 34 | Fabaceae | Karanj | T, 09.05.22 |
| 63 | <i>Rumex dentatus</i> L. 35 | Polygonaceae | Jangalichuka | H, 09.05.22 |
| 64 | <i>Saponaria officinalis</i> L. AS-61 | Caryophyllaceae | Soapwort | H, 05.11.22 |
| 65 | <i>Scoparia dulcis</i> L. 36 | Plantaginaceae | Bon dhone | H, 09.05.22 |
| 66 | <i>Senegalia brevispica</i> (Harms)Seigler &Ebinger 37 | Fabaceae | Kalokanta | S, 09.05.22 |
| 67 | <i>Senna occidentalis</i> (L.)Link 38 | Fabaceae | Kolkesunda ful | H, 09.05.22 |
| 68 | <i>Sherardia arvensis</i> L. 39 | Rubiaceae | Field madder | H, 09.05.22 |
| 69 | <i>Sida acuta</i> Burm.f. AS-51 | Malvaceae | Bon methi | H, 20.03.22 |
| 70 | <i>Sida rhombifolia</i> L. 40 | Malvaceae | Shetberela | H, 09.05.22 |
| 71 | <i>Simarouba glauca</i> DC. 41 | Simaroubaceae | Shinwi | T, 09.05.22 |
| 72 | <i>Solanum sisymbriifolium</i> Lam. 42 | Solanaceae | Kanta begun, Kantikari | H, 09.05.22 |
| 73 | <i>Streblus asper</i> Lour. 43 | Moraceae | Sheora | S, 09.05.22 |
| 74 | <i>Strobilanthes hirta</i> (Vahl)Blume 44 | Acanthaceae | Ban-pan | H, 09.05.22 |
| 75 | <i>Terminalia arjuna</i> (Roxb.ex DC.) Wight&Arn. 45 | Combretaceae | Arjun | T, 09.05.22 |
| 76 | <i>Trema orientale</i> (L.)Blume AS-63 | Cannabaceae | Chikun | T, 05.11.22 |
| 77 | <i>Tridax procumbens</i> L. AS-12 | Asteraceae | Toraful | H, 20.03.22 |
| 78 | <i>Triumfetta rhomboidea</i> Jacq. AS-58 | Malvaceae | Bon okra | H, 05.11.22 |
| 79 | <i>Urena lobata</i> L. AS-01 | Malvaceae | Jonglighagra | H, 20.03.22 |
| 80 | <i>Vachellia nilotica</i> (L.)P.J.H. Hurter & Mabb. 46 | Fabaceae | Babla | T, 09.05.22 |
| 81 | <i>Vallesia glabra</i> (Cav.) Link 47 | Apocynaceae | Cuncuno | S, 09.05.22 |
| 82 | <i>Ventilago denticulata</i> Willd. 48 | Rhamnaceae | Pittiraidhani | L, 09.05.22 |
| 83 | <i>Vitex negundo</i> L. 49 | Lamiaceae | Nishinda | S, 09.05.22 |
| 84 | <i>Woodfordia fruticosa</i> (L.) Kurz 50 | Lythraceae | Dhai Ful | T, 09.05.22 |
| 85 | <i>Ziziphus jujuba</i> Mill. AS-60 | Rhamnaceae | Siyakul | S, 05.11.22 |

H-Herb, S-Shrub, T-Tree, L-Lianas, C-Climber.

Table 2. Conservation status of some collected plant species from Biharinath hill, Bankura district.

| Sl. No | Scientific names of the species | Family | Latitude | Longitude | Conservation status |
|--------|---|----------|----------|-----------|---------------------|
| 1 | <i>Acacia auriculiformis</i> A. Cunn. ex Benth. | Fabaceae | 23.54° N | 86.94° E | LC |
| 2 | <i>Aegle marmelos</i> (L.)Correa | Rutaceae | 23.55° N | 86.95° E | NE |

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|----|--|----------------|----------------------|----------------------|----|
| 3 | <i>Ailanthus excelsa</i> Roxb. | Simaroubaceae | 23.56° N | 86.94° E | NE |
| 4 | <i>Alstonia scholaris</i> (L.)R. Br. | Apocynaceae | 23.55° N 23.57° N | 86.95° E 86.95° E | LC |
| 5 | <i>Alternanthera sessilis</i> (L.) R. Br.ex DC. | Amaranthaceae | 23.58° N 23.56° N | 86.95° E 86.94° E | LC |
| 6 | <i>Annona squamosa</i> L. | Annonaceae | 23.54° N | 86.94° E | LC |
| 7 | <i>Argemone mexicana</i> L. | Papaveraceae | 23.59° N | 86.93° E | NE |
| 8 | <i>Azadirachta indica</i> A. Juss. | Meliaceae | 23.55° N 23.58° N | 86.95° E 86.94° E | LC |
| 9 | <i>Bauhinia purpurea</i> L. | Fabaceae | 23.58° N | 86.95° E | LC |
| 10 | <i>Breynia retusa</i> (Dennst.)Alston | Phyllanthaceae | 23.55° N | 86.95° E | LC |
| 11 | <i>Bridelia micrantha</i> (Hochst.) Baill. | Phyllanthaceae | 23.55° N | 86.94° E | LC |
| 12 | <i>Butea monosperma</i> (Lam.) Kuntze | Fabaceae | 23.55° N | 86.95° E | LC |
| 13 | <i>Cajanus scarabaeoides</i> (L.) Thouars | Fabaceae | 23.55° N | 86.94° E | LC |
| 14 | <i>Cardiospermum halicacabum</i> L. | Sapindaceae | 23.58° N | 86.95° E | LC |
| 15 | <i>Carissa spinarum</i> L. | Apocynaceae | 23.55° N 23.57° N | 86.95° E 86.94° E | LC |
| 16 | <i>Casearia sylvestris</i> Sw. | Salicaceae | 23.55° N | 86.94° E | LC |
| 17 | <i>Casuarina equisetifolia</i> L. | Casuarinaceae | 23.58° N | 86.94° E | LC |
| 18 | <i>Cephalanthus occidentalis</i> L. | Rubiaceae | 23.55° N | 86.95° E | LC |
| 19 | <i>Cleistanthus collinus</i> (Roxb.) Benth. ex Hook.f. | Phyllanthaceae | 23.55° N | 86.95° E | V |
| 20 | <i>Clerodendrum trichotomum</i> Thunb. | Lamiaceae | 23.58° N | 86.95° E | LC |
| 21 | <i>Dalbergia sissoo</i> Roxb.ex DC. | Fabaceae | 23.58° N | 86.94° E | LC |
| 22 | <i>Ficus benghalensis</i> L. | Moraceae | 23.58° N | 86.94° E | NE |
| 23 | <i>Ficus hispida</i> L.f. | Moraceae | 23.54° N | 86.94° E | LC |
| 24 | <i>Flacourtia indica</i> (Burm.f.) Merr. | Salicaceae | 23.54° N | 86.94° E | LC |
| 25 | <i>Glycosmis pentaphylla</i> (Retz.) DC. | Rutaceae | 23.57° N | 86.95° E | LC |
| 26 | <i>Gossypium hirsutum</i> L. | Malvaceae | 23.57° N | 86.95° E | V |
| 27 | <i>Hibiscus rosa-sinensis</i> L. | Malvaceae | 23.58° N | 86.94° E | NE |
| 28 | <i>Holarrhena pubescens</i> Wall.ex G. Don | Apocynaceae | 23.54° N | 86.94° E | LC |
| 29 | <i>Hygrophila auriculata</i> (Schumacher.)Heine | Acanthaceae | 23.58° N 23.55° N | 86.93° E 86.95° E | LC |
| 30 | <i>Jatropha gossypifolia</i> L. | Euphorbiaceae | 23.55° N | 86.95° E | LC |
| 31 | <i>Mallotus repandus</i> (Rottler) Mull.Arg. | Euphorbiaceae | 23.58° N | 86.95° E | LC |
| 32 | <i>Mangifera indica</i> L. | Anacardiaceae | 23.58° N | 86.94° E | DD |
| 33 | <i>Mimosa pudica</i> L. | Fabaceae | 23.58° N | 86.95° E | LC |
| 34 | <i>Phoenix sylvestris</i> (L.)Roxb. | Arecaceae | 23.55° N | 86.95° E | NE |
| 35 | <i>Pongamia pinnata</i> (L.)Pierre | Fabaceae | 23.58° N | 86.94° E | LC |
| 36 | <i>Senegalia brevispica</i> (Harms) Seigler & Ebinger | Fabaceae | 23.55° N | 86.95° E | LC |

| | | | | | |
|----|--|---------------|----------------------|----------------------|----|
| 37 | <i>Senna occidentalis</i> (L.)Link | Fabaceae | 23.54° N 23.57° N | 86.94° E 86.95° E | LC |
| 38 | <i>Sida acuta</i> Burm. f. | Malvaceae | 23.54° N | 86.93° E | NE |
| 39 | <i>Sida rhombifolia</i> L. | Malvaceae | 23.55° N | 86.95° E | NE |
| 40 | <i>Simarouba glauca</i> DC. | Simaroubaceae | 23.55° N | 86.91° E | LC |
| 41 | <i>Streblus asper</i> Lour. | Moraceae | 23.54° N 23.56° N | 86.94° E 86.94° E | LC |
| 42 | <i>Trema orientale</i> (L.) Blume | Cannabaceae | 23.54° N | 86.94° E | LC |
| 43 | <i>Urena lobata</i> L. | Malvaceae | 23.54° N | 86.94° E | LC |
| 44 | <i>Vachellia nilotica</i> (L.) P.J.H. Hurter & Mabb. | Fabaceae | 23.54° N | 86.93° E | LC |
| 45 | <i>Vallesia glabra</i> (Cav.) Link | Apocynaceae | 23.54° N | 86.94° E | LC |
| 46 | <i>Vitex negundo</i> L. | Lamiaceae | 23.58° N 23.54° N | 86.94° E 86.93° E | LC |
| 47 | <i>Woodfordia fruticosa</i> (L.) Kurz | Lythraceae | 23.55° N | 86.95° E | LC |
| 48 | <i>Ziziphus jujuba</i> Mill. | Rhamnaceae | 23.54° N | 86.94° E | LC |

LC-Least Concern, NE-Not Evaluated, V-Vulnerable, DD-Data Deficient.



Fig.1. A few moments of Biharinath hill, Bankura district.

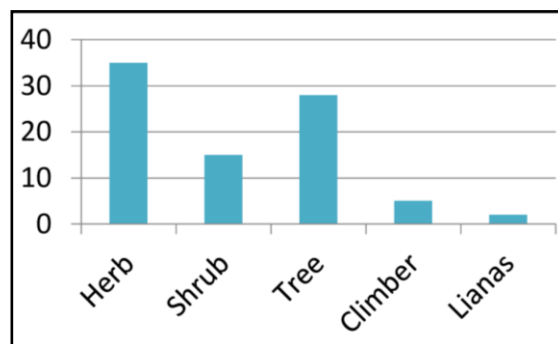


Fig.2. Habits of collected plant species from Biharinath hill.

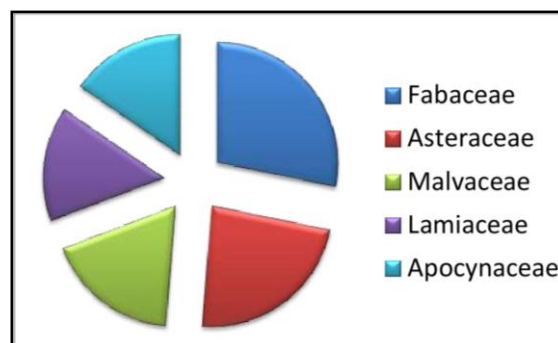


Fig.3. Dominant families of Biharinath hill.

Diversity of angiosperms and their conservation status in Biharinath Hill, Bankura, West Bengal, India:

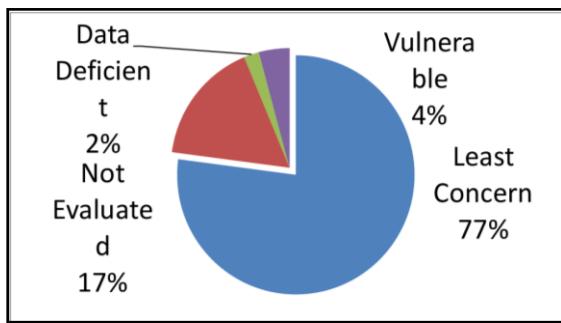


Fig.4. Conservation status of collected plant species.

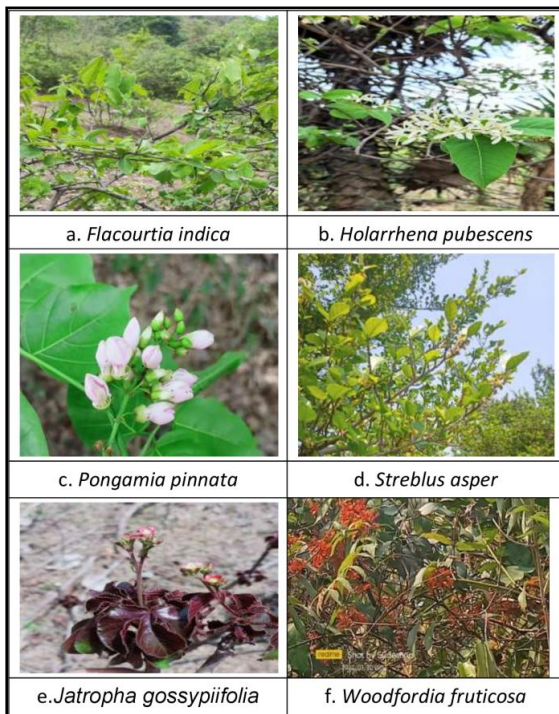


Fig.5a. A photo plate showing few (a-f) floras of Biharinath hill.

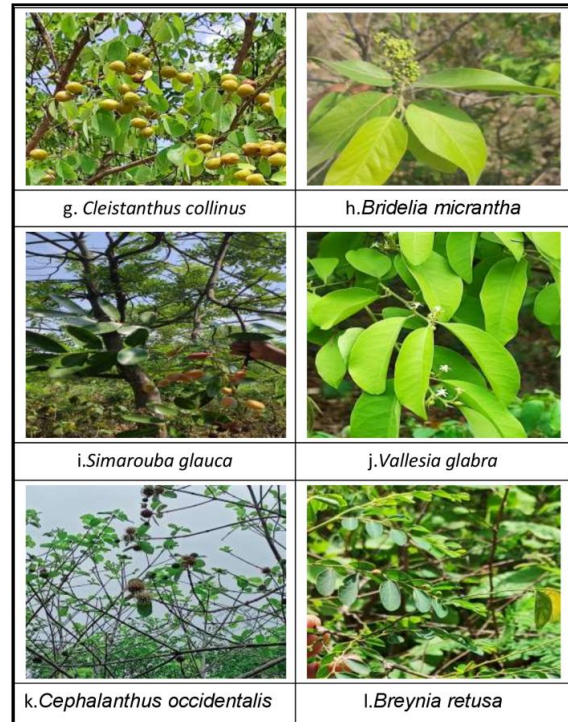


Fig.5b. A photo plate showing few (g-l) floras of Biharinath hill.