Some additions to our knowledge of the Plants of Ramtek (Maharashtra)

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In the present communication about 112 species are reported from Ramtek as an addition to the list by Graham in 1912. The families Nymphaeaceae, Linaceae, Loganiaceae, Nyctaginaceae, Alismaceae, Eriocaulaceae and Cyperaceae are here recorded for the first time. The species listed here are accompanied by additional notes and have been grouped as 1. Aquatic and semiaquatic, 2. Weeds, 3. Introduced plants. Each species is provided with short descriptive notes, locality and collection number.

INTRODUCTION

The town of Ramtek, the headquarters of the tehsil bearing the name, is situated at 21° 24' N and 79° 20' E, 45 km. north-east of Nagpur. It is approached by a short deviation on the main Nagpur-Jabalpur road and even from a distance the white-coated temples on the hill can be seen gleaming in the sun. Enclosed in the remains of an old Maratha fortress, the ancient temples of Ramtek are picturesquely situated on the top of a hill about 200 m. high. The little town of Ramtek, which lies at the foot of this hill, derives its name from the temple of Rama, tek meaning hill. Hallowed by tradition as a place of pilgrimage, Ramtek owes much of its significance to the rich lore connected with the origin of the temples. The legend goes that Rama stayed for some time at Ramtek on his way to Lanka.

There are a large number of lakes and tanks about Ramtek, one of which goes by the name of "Amba Talao." It has a large number of modern temples built around it, framed against the hills. Pilgrims and tourists begin their trek up the hill from the Amba tank, from where a flight of steps leads up to the temples at the opposite side and another flight descends to the town of Ramtek.

The temples on the hill are Ramtek's pride. In a more earthy way, Ramtek is celebrated for the cultivation of a special quality of "pan" which is exported to Bombay and Poona. In the vicinity are also some manganese mines of importance and 8 km. beyond, the picturesque Khinsi tank with a dak-bungalow overlooking it, is a favourite picnic spot.
R. J. D. Graham visited this area in the first week of September 1912 and made observations on the flora of Ramtek (J. Bombay nat. Hist. Soc. 22: 237-241, 1913). His main object in undertaking this tour was to compare the flora of transition formations with that of the Deccan trap. He collected about 216 plant specimens, which included dicots and monocots and ferns. But he did not include any member of the Cyperaceae and very few grasses and Eriocaulons, as the late rains delayed their flowering. Only grasses, which flowered early, were included. Graham states: "From a botanical point of view the Central Provinces (in which Ramtek was included previously—before the reorganization of states) form a particularly interesting area as they furnished the meeting place of the Bombay or western flora and the Bengal or eastern flora. Nagpur may particularly be taken as the eastern limit of the Deccan trap and with it the Deccan flora. Eastwards through Bhandara and Chattisgarh the Bengal flora commences."

During the last five years some new records of plants have been published based on the material collected from Ramtek. In 1963, Kapoor and others published "A note on the occurrence of Rhynchospora longisetis R. Br. (Family: Cyperaceae) in India with some interesting observations" (J. Bombay nat. Hist. Soc. 60: 379-380). This note was based on the material collected by me during 1959 and deposited in the Herbarium, National Botanic Garden, Lucknow. The previous record of this plant was by Graham from Jubulpore Farm, Jabalpur (Madhya Pradesh) which lies about 217 km. north-east of Ramtek. It will be worthwhile to mention here that Graham in his paper on the vegetation of Ramtek, based on the collection made in September 1912, does not report the occurrence of this interesting species in that area. Another taxon of Cyperaceae, a new record for India, is a plant collected from this area by Vinodini P. Donde (Bull. Bot. Surv. India 8: 358, 1966). During her floristic studies on the Cyperaceae of Nagpur and its neighbourhood she came across Scirpus kernii Raymond, which so far was thought to be restricted to Africa. The material was collected at Amba tank near Ramtek on October 2, 1962, and deposited in the Central National Herbarium, Calcutta. In 1966, the author published "Some Plant Records from the erstwhile Central Provinces and Berar" (J. Bombay nat. Hist. Soc. 62: 455-462, 1966) and reported the following plants from Ramtek: Nymphaea nouchali Burm. f., Ageratum conyzoides Linn., Tridax procumbens Linn., Vernonia cinerea (Linn.) Less.; and Hyptis suaveolens Poit.

Since then there is no record of any published work on the plants of Ramtek.
SOME ADDITIONAL NOTES ON THE FLORA OF RAMTEK

Since Graham explored this area in 1912, a large number of changes in the vegetation have taken place. Some species which were recorded from this locality are not to be found today even after an intensive search while a number of species not recorded in that list, are very common these days. The species which have appeared recently can be divided into the following heads.

(1) Those species which have appeared in ponds, lakes and rivers and marshy places. These may be classed as aquatic and semiaquatic plants. These include: Nymphaea nouchali Burm. f.; Jussiaea repens Linn.; J. linifolia Vahl; Trapa natans Linn. var. bispinosa (Roxb.) Makino, Nymphaoides cristatum (Roxb.) O. Kuntze, Ipomoea aquatica Forsk.; Utricularia flexuosa Vahl, Lindernia ciliata (Colsm.) Pennell; Veronica anagallis Linn.; Stemodia viscosa Roxb.; Sagittaria sagittifolia Linn.; Butomopsis lanceolata Kunth, Eriocaulon quinquangulare Linn.; Eleocharis atropurpurea Kunth, Cyperus iria Linn.; C. pumilus Nees, C. diffusus Roxb.; C. eleusinoides Kunth, C. flavidus Retz.; Scirpus supinus Linn. etc.

(2) Those species which are found in the undergrowth in the forest, along roads, paths and in waste lands. These may be termed Weeds. A large number of weeds have spread in the forest and have become troublesome pests in recent years. Mention is made here of Hyptis suaveolens Poit. which is very common in the forests. This is an American plant and has spread in other states also. The following weeds are common these days at Ramtek: Heliotropium ovalifolium Forsk., Indigofera glandulosa Willd.; l. trita Linn. f.; Phyllanthus maderaspatensis Linn.; Sida acuta Burm. f.; S. spinosa Linn.; Trichodesma indicum R. Br., T. zeylanicum R. Br.; Vernonia cinerea Less.; Ageratum conyzoides Linn.; Polycarpacea corymbosa Lam.; Corchorus fascicularis Lam.; Alysicarpus rugosus DC.; A. hamosus Edgew.; Smithia sensitiva Ait., Melothria maderaspatana (Linn.) Cogn., Goniocaulon glabrum Cass., Rungia parviflora Nees; Justicia simplex D. Don; Boerhaavia diffusa Linn.; Aerva lanata Juss.; Euphorbia hirta Linn. etc.

(3) Planted trees: Planting of trees along roadsides, in the fields, parks and near temples and mosques is an important source of introduced plants. In the past a large number of forests have been cut and burnt down. But recently there is a move to plant more and more trees and shrubs to beautify roads and parks. Trees of economic importance are cultivated in the fields and gardens and plantations are raised. Generally near towns and villages there are cultivated forests of “Babool” (Acacia
nilotica (L.) Del. ssp. indica Brenan) for firewood and for gum and tannin. This species is also an important source of fodder for goats. This species, it seems, was not introduced in Graham’s time. Graham’s list does not include the mango (Mangifera indica Linn.) and Acacia farnesiana Willd.; which is a native of tropical America. The above mentioned trees are commonly cultivated these days.

On scanning Graham’s list, it becomes clear that this area has not been thoroughly surveyed. Some species have been overlooked and there are some recent additions. Some of the common shrubs and trees of economic importance such as ‘Dikamali’ (Gardenia resinifera Roth), ‘Nirmali’ (Strychnos potatorum Linn. f.), ‘Tendu’ (Diospyros melanoxylon Roxb.) have been left out in Graham’s list.

It was found that the following families were not represented in Graham’s list: 1. Nymphaeaceae, 2. Linaceae, 3. Loganiaceae, 4. Nyctaginaceae, 5. Alismaceae, 6. Eriocaulaceae, and 7. Cyperaceae. In the present paper more than a hundred species belonging to 35 families have been added to the flora of this region since Graham explored this area in 1912.

The author had an opportunity to survey the vegetation of Ramtek and make a collection of plants from this area during two tours, the first in the last week of January 1959 and the second in the middle of October same year. During these tours more than 400 plant specimens were collected. The following localities of Ramtek were visited: 1. Nagarjun hill forest, 2. Bank of the Sur River, 3. Lakes and ponds about the town, 4. Ramtek Forest Division, the hills near the temples, 5. Khinni tank, 6. Neighbourhood of the town, 7. Cultivated fields and waste lands.

In the present paper only those plants have been included which are not given in Graham’s paper. All the specimens have been deposited in the Herbarium of the National Botanic Garden, Lucknow.

The plants have been arranged according to Bentham and Hooker’s system of classification and every attempt has been made to adjust the nomenclature of plants according to the latest findings on the subject.

After a very short description of the plant, which is helpful in the identification of the plant in the field, the locality from which the plants were collected, is given. The numbers indicate the field book numbers attached to the specimens.
ADDITIONAL PLANTS¹

**NYMPHAEACEAE**

*Nymphaea nouchali* Burm. f. (*N. pubescens* Willd.)

Large aquatic herb with pink, bluish and pale yellow flowers. Loc.: Common in ditches and tanks about Ramtek (M.S.). (57544).

**CAPPARIDACEAE**

*Capparis zeylanica* Linn.

A shrub scrambling or climbing by means of its recurved thorns, flowers pink. Common in hedges and thickets. (57507).

**MALVACEAE**

*Hibiscus cannabinus* Linn.


*H. lobatus* (Murr.) O. Ktze. (*Solandra lobata* Murr., *Hibiscus solandra* L’Herit.)

Herbaceous, erect; flowers white; quite common. Loc.: Nagarjun hill forest, Ramtek. (70714).

*Sida spinosa* Linn.

Herb with pale yellow flowers. (57511).

*Pavonia zeylanica* Cav.

Herb, not common. Loc.: Ramtek Forest Division. (57475).

**TILIACEAE**

*Corchorus fascicularis* Lam.

Herb with yellow flowers. Common near ponds. (57484).

**LINACEAE**

*Linum usitatissimum* Linn.


**MALPIGHIACEAE**

*Aspidopterys wallichii* Hook. f.

A woody climber with winged fruits. (57471).

¹ The numbers given in brackets represent herbarium specimens; unless the contrary is stated, the collectors are Balapure & Party.
ANACARDIACEAE

*Mangifera indica* Linn.
Mango tree. Cultivated.

PAPILIONACEAE

*Crotalaria albida* Heyne ex Roth
Herb with yellow flowers. Loc.: Ramtek Forest Division. (57473)

*Indigofera linifolia* Retz.
Herb with pink flowers. Common. (57500).

*I. trita* Linn. f.
Tall herb with reddish flowers. Common. (57485).

*I. glandulosa* Willd.
Herb with pods. Common. (57547, 57495).

*Alysicarpus rugosus* DC. var. *styracifolius* Baker
Herb with pinkish-yellow flowers. Common. (57509).

*A. hamosus* Edgew.

*Dolichos lablab* Linn.
Large climber with white flowers. Cultivated. (57504).

*Smithia sensitiva* Ait.
Herb with yellow flowers, very common in wet places. Loc.: Nagaljun hill forest. Balapure 70790.

*Phaseolus trilobus* Ait.
Climbing legume, cultivated. (57488).

*Desmodium diffusum* DC.
A legume with yellow flowers. (57491).

*Cicer arietinum* Linn.
PLANTS OF RAMTEK

Rhynchosia bracteata Benth.
Herb, twining, not common. Loc.: Nagarjun hill forest. Balapure 70712.

Sesbania bispinosa (Jacq.) W. F. Wight. S. aculeata Pers.
Shrub in fruiting state, common near lake. (57501).

Lathyrus sativus Linn.
Cultivated. (57550).

Clitoria ternatea Linn.
A climber with blue flowers. Common on field hedges. Balapure 70811.

CAESALPINIACEAE

Bauhinia racemosa Lamk.

Acacia farnesiana Willd.
A shrub with dark yellow flowers. (57537).

A. nilotica (L.) Del. ssp. indica Brenan (A. arabica Willd).
A small tree. Planted near the town.

A. leucophloea Willd.
A tree with yellowish bark. Vern. Hivar. (57467)

TRAPACEAE

Trapa natans Linn. var. bispinosa (Roxb.). Makino.
Cultivated in ponds and lakes. (57530).

ONAGRACEAE

Jussiaea linifolia Vahl.
Herb, common in dried ponds. Loc.: Ramtek Forest Division. (57454).

J. repens Linn.
An aquatic herb. (57531).

CUCURBITACEAE

Cucumis trigonus Roxb.
A procumbent plant with yellow flowers. (57520).
Melothria maderaspatana (L.) Cogn.
Annual. Common. Loc.: Nagarjun hill forest. (70716)

Rubiaceae

Oldenlandia corymbosa Linn.
Herb near marshy places. (57525).

COMPOSITAE

Ageratum conyzoides Linn.
Annual weed with pale blue flowers. (57494).

Grangea maderaspatana Poir.
A composite herb with yellow flowers. Common in wet places. (57513).

Goniocaulon glabrum Cass.

Vernonia cinerea Less.
Herb with pinkish-violet flowers. Common. (57451).

Volutarella ramosa (Roxb.) Santapau (V. divaricata Benth. & Hook.)

Plumbaginaceae

Plumbago zeylanica Linn.

Ebenaceae

Diospyros melanoxyylon Roxb.
A medium-sized tree. Common in forest. (57448), Balapure 70881.

Apocynaceae

Ichnocarpus frutescens Br.
A climber in fruiting state. Common. (57468).

Wrightia tinctoria R. Br.
A small tree in fruiting state, bark white. Most dominant tree. (57460).
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LOGANIACEAE

Strychnos potatorum Linn. f.

GENTIANACEAE

Nymphoides cristatum (Roxb.) O. Kuntze (Limnanthemum cristatum Griseb.)
An aquatic floating herb with white flowers. Common. (57523).

Nymphoides indicum (L.) O. Kuntze (Limnanthemum indicum Griseb.)
An aquatic herb with white flowers. (57522).

Exacum pedunculatum Linn.
Herb with blue flowers, not common. (57486).

Enicostemma littorale Blume
Herb of medicinal importance. (57496), Balapure 70676.

BORAGINACEAE

Heliotropium ovalifolium Forsk.
Herb with white flowers; common. (57512).

Trichodesma zeylanicum R. Br.

CONVOLVULACEAE

Ipomoea aquatica Forsk.
A creeping herb, very common. (57521).

I. hispida (Vahl) R. & S.
A spreading herb, common. (57557).

SCROPHULARIACEAE

Lindernia ciliata (Colsm.) Pennell (Bonnaya brachiata Link & Otto).

Veronica anagallis Linn.
Herb with violet flowers, common near lake-water. (57519).
Striga euphrasioides Benth.
Herb with white flowers, common. Loc.: Nagarjun hill forest. Balapure 70709.

Stemodia viscosa Roxb.
Herb in dried pond, common. (57554).

Lentiburiaceae

Utricularia flexuosa Vahl.
Aquatic herb with yellow flowers, common in pond. (57528).

Acanthaceae

Hygrophila polysperma T. Anders.
Herb with white flowers, common. (57517).

Daedalacanthus purpurascens T. Anders.
Herb with purple flowers, very common in the forest. Loc.: Nagarjun hill forest. Balapure 70708.

Barleria cristata Linn.
Herb, common. Loc.: Nagarjun hill forest. (57450), Balapure 70713.

Justicia simplex D. Don.
Herb with pinkish flowers, common. Loc.: Nagarjun hill forest. Balapure 70704.

Rungia parviflora Nees.
Herb, common. Loc.: Forest near Khinni tank. Balapure 70858.

Labiatae

Hyptis suaveolens Poit.
A tall, rigid sweet-smelling herb with 4-angled rough haired stem. Flowers small and blue. Loc.: Ramtek Forest Division. (57479).

Nyctaginaceae

Boerhaavia diffusa Linn.
Herb, diffuse, common. Loc.: Nagarjun hill forest. Balapure 70738.

Amaranthaceae

Amaranthus tricolor Linn.
Herb, common. (57514).
Aerva lanata Juss.
   Herb with small white flowers, common. Loc.: Nagarjun hill forest. Balapure 70735.

Nothosaerva brachiata Wight.
   Herb with whitish flowers, common. Loc.: Ramtek Forest Division. (57480).

Digera muricata (Linn.) Mart.
   Herb with pink flowers, common. (57555).

**POLYGONACEAE**

Polygonum hydropiper Linn.
   Herb with white flowers, common. Loc.: Nagarjun hill forest. Balapure 70710.

**EUPHORBIACEAE**

Euphorbia hirta Linn.
   Herb, common. Loc.: Ramtek Forest Division. (57449).

E. perbracteata Gage.
   Herb, rare. (57552).

Phyllanthus maderaspatensis Linn.
   Herb, common in waste lands. (57505, 57534).

Tragia cannabina Linn. f.
   An evergreen climbing hispid herb with stinging bristles, variable in foliage. Rare. Balapure 70802, (57476).

**URTICACEAE**

Ficus tomentosa Roxb.
   Large shady tree. (57482).

**COMMELINACEAE**

Commelina hasskarlii C.B.Cl.

Cyanotis axillaris (Linn.) Schultz. f.
   Herb. Loc.: Nagarjun hill forest. Balapure 70784.
Alismaceae

Sagittaria sagittifolia Linn.
An aquatic herb with white flowers, common. (57524).

Butomopsis lanceolata Kunth
A hydrophyte, common. (57463).

Eriocaulaceae

Eriocaulon quinquangulare Linn.
Herb with small white flowers in heads, quite common in moist places. Loc.: Nagarjun hill forest. Balapure 70631.

Cyperaceae

Bulbostylis barbata Kunth
A slender herb, quite common. Loc.: Nagarjun hill forest. Balapure 70636.

Eleocharis atropurpurea Kunth
A sedge in water. (57466).

Cyperus sanguinolentus Vahl
Sedge, quite common. On way to Sur River. Balapure 70752.

C. pumilus Nees
Sedge, quite common in moist places. Loc.: Nagarjun hill forest. Balapure 70635, 70726.

C. iria Linn.

C. diffusus Roxb.

C. eleusineoides Kunth
Sedge, common in moist places. Loc.: Nagarjun hill forest. Balapure 70711.

C. flavidus Retz.
Scirpus supinus Linn.
   Sedge in water. (57466).

S. kernii Raymond
   Collected by V. P. Donde from Ramtek, near Amba tank on 2 Oct. 1962. This is a new record for India. D. 44 (CAL).

Fimbristylis schoenoides Vahl
   Sedge, common. Loc.: Nagarjun hill forest. Balapure 70628.

F. tetragona R. Br.
   Sedge, common. Loc.: Nagarjun hill forest. Balapure 70630.

F. monostachya Hassk.

F. diphylla Vahl
   Sedge, quite common. Loc.: Nagarjun hill forest. Balapure 70637.

Rhynchospora longisetis R. Br.
   Sedge, common in moist places. Loc.: Nagarjun hill forest. Balapure 70606.

Gramineae

Aristida depressa Retz.
   Common, Ramtek Forest Division. (57446).

Brachiaria eruciformis Griseb.
   Common. (57541).

Elytrophorus spicatus (Willd.) A. Camus
   Near ponds. (57464).

Eragrostis unioloides Nees

E. diarrhena Steud.
   Spikes, reddish; common in fields. (57548).

E. gangetica Steud.
   Common near water. (57469).
E. tenella R. & S.
Common grass in waste lands and in cultivated fields. (57492).

Ischaemum rugosum Salisb.
Common. (57546).

I. molle Hook. f.
Common near drying ponds. (57489).

Iseilema laxum Hack.
Common in waste fields. (57490).

Oryza sativa Linn.
Commonly cultivated rice which is also the staple food here. (57526).

Sorghum bicolor Moench.
Ramtek near Nagpur. (57516).

Themeda quadrivalvis O. Ktze.
Common in waste lands. (57497).

Rottboellia sp.
An aquatic grass, common in lake. (57499).

Dichanthium caricosum A. Camus
D. annulatum Stapf
Common. Balapure 70678.

Vetiveria zizanioides (Linn.) Nash

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REFERENCES


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