

CHAPTER - VI

Statistical analysis of the flora

CHAPTER VI

STATISTICAL ANALYSIS OF THE FLORA

In the following pages statistical analysis of the flora has been carried out.

Table No. 6.1 : Synopsis of the wild and cultivated genera and species from the area

Name of the family	Number of wild		Number of cultivated		Total	
	Gene- ra	Spe- cies	Gene- ra	Spe- cies	Gene- ra	Spe- cies
1. Ranunculaceae	1	1	-	-	1	1
2. Dilleniaceae	1	1	-	-	1	1
3. Magnoliaceae	-	-	2	2	2	2
4. Annonaceae	-	-	3	3	3	3
5. Menispermaceae	5	6	-	-	5	6
6. Nymphaeaceae	2	3	-	-	2	3
7. Papaveraceae	1	1	-	-	1	1
8. Brassicaceae	1	1	2	3	3	4
9. Capparidaceae	2	3	-	-	2	3
10. Flacourtiaceae	1	1	-	-	1	1
11. Caryophyllaceae	1	1	1	1	2	2
12. Portulacaceae	1	1	1	1	1	2
13. Tamaricaceae	1	1	-	-	1	1

contd.

Table No. 6.1 (Contd.)

Name of the family	Number of wild		Number of cultivated		Total	
	Gene- ra	Spe- cies	Gene- ra	Spe- cies	Gene- ra	Spe- cies
14. Guttiferae	2	2	-	-	2	2
15. Ancistrocladaceae	1	1	-	-	1	1
16. Malvaceae	6	13	3	5	8	18
17. Bombacaceae	2	3	-	-	2	3
18. Sterculiaceae	6	7	-	-	6	7
19. Tiliaceae	4	8	-	-	4	8
20. Elaeocarpaceae	-	-	1	1	1	1
21. Linaceae	1	1	-	-	1	1
22. Malpighiaceae	2	2	-	-	2	2
23. Oxalidaceae	2	2	-	-	2	2
24. Balsaminaceae	1	3	-	-	1	3
25. Rutaceae	1	2	3	4	4	6
26. Burseraceae	1	1	-	-	1	1
27. Meliaceae	2	2	2	2	3	4
28. Olacaceae	2	2	-	-	2	2
29. Rhamnaceae	1	4	-	-	1	4
30. Ampelidaceae	3	9	-	-	3	9
31. Leeaceae	1	3	-	-	1	3
32. Sapindaceae	2	2	-	-	2	2

contd.

Table No. 6.1 (Contd.)

Name of the family	Number of wild		Number of cultivated		Total	
	Gene- ra	Spe- cies	Gene- ra	Spe- cies	Gene- ra	Spe- cies
33. Anacardiaceae	5	5	1	1	6	6
34. Moringaceae	-	-	1	1	1	1
35. Fabaceae	26	47	5	8	29	55
36. Caesalpiaceae	5	12	4	4	8	16
37. Mimosaceae	2	3	3	4	4	7
38. Rosaceae	-	-	1	1	1	1
39. Crassulaceae	1	1	-	-	1	1
40. Haloragidaceae	1	1	-	-	1	1
41. Rhizophoraceae	2	2	-	-	2	2
42. Combretaceae	5	5	2	2	5	7
43. Myrtaceae	1	1	3	3	4	4
44. Lecythidaceae	2	2	-	-	2	2
45. Melastomaceae	2	2	-	-	2	2
46. Lythraceae	3	3	2	2	5	5
47. Onagraceae	1	1	-	-	1	1
48. Samydeae	1	1	-	-	1	1
49. Turneraceae	1	1	-	-	1	1
50. Carica ^C _X ae	-	-	1	1	1	1
51. Passifloraceae	1	1	-	-	1	1
52. Cucurbitaceae	5	5	7	7	9	12

contd.

Table No. 6.1 (Contd.)

Name of the family	Number of wild		Number of cultivated		Total	
	Gene- ra	Spe- cies	Gene- ra	Spe- cies	Gene- ra	Spe- cies
53. Begoniaceae	1	1	-	-	1	1
54. Cactaceae	1	1	-	-	1	1
55. Ficoideae	1	1	-	-	1	1
56. Molluginaceae	1	1	-	-	1	1
57. Apiaceae	2	2	2	2	4	4
58. Rubiaceae	11	15	1	1	11	16
59. Asteraceae	24	29	4	4	28	33
60. Goodeniaceae	1	1	-	-	1	1
61. Plumbaginaceae	1	1	-	-	1	1
62. Myrsinaceae	1	1	-	-	1	1
63. Sapotaceae	3	4	1	1	4	5
64. Oleaceae	1	1	2	3	3	4
65. Salvadoraceae	1	1	-	-	1	1
66. Apocynaceae	7	7	6	6	12	13
67. Periplocaceae	2	2	-	-	2	2
68. Asclepiadaceae	6	7	-	-	6	7
69. Loganiaceae	2	2	-	-	2	2
70. Gentianaceae	4	5	-	-	4	5
71. Hydrophyllaceae	1	1	-	-	1	1
72. Boraginaceae	3	5	-	-	3	5

contd.

Table No. 6.1 (Contd.)

Name of the family	Number of wild		Number of Cultivated		Total	
	Gene- ra	Spe- cies	Gene- ra	Spe- cies	Gene- ra	Spe- cies
73. Convolvulaceae	8	16	-	-	8	16
74. Solanaceae	3	5	3	3	6	8
75. Scrophulariaceae	7	7	-	-	7	7
76. Crobanthaceae	1	1	-	-	1	1
77. Lentibulariaceae	1	2	-	-	1	2
78. Bignoniaceae	2	2	1	1	3	3
79. Pedaliaceae	2	2	--	-	2	2
80. Acanthaceae	17	23	2	2	19	25
81. Verbenaceae	10	14	1	1	10	15
82. Lamiaceae	7	8	3	3	9	11
83. Nyctaginaceae	1	1	2	2	3	3
84. Amaranthaceae	7	10	2	2	8	12
85. Chenopodiaceae	2	2	-	-	2	2
86. Aristolochiaceae	1	1	-	-	1	1
87. Lauraceae	2	2	-	-	2	2
88. Myristicaceae	-	-	1	1	1	1
89. Piperaceae	1	1	1	1	2	2
90. Loranthaceae	2	2	-	-	2	2
91. Santalaceae	1	1	-	-	1	1
92. Euphorbiaceae	15	25	6	6	21	31

contd.

Table No. 6.1 (Contd.)

Name of the family	Number of wild		Number of cultivated			Total
	Gene- ra	Spe- cies	Gene- ra	Spe- cies	Gene- ra	Spe- cies
93. Ulmaceae	3	3	-	-	3	3
94. Moraceae	2	11	2	3	3	14
95. Urticaceae	5	5	1	1	6	6
96. Casuarinaceae	-	-	1	1	1	1
97. Ceratophyllaceae	1	1	-	-	1	1
98. Gnetaceae	1	1	-	-	1	1
99. Hydrocharitaceae	4	4	-	-	4	4
100. Orchidaceae	5	8	-	-	5	8
101. Zingiberaceae	3	4	-	-	3	4
102. Cannaceae	-	-	1	1	1	1
103. Marantaceae	1	1	-	-	1	1
104. Musaceae	1	1	1	1	1	2
105. Hypoxidaceae	2	2	-	-	2	2
106. Amaryllidaceae	1	1	1	1	2	2
107. Agavaceae	-	-	1	1	1	1
108. Taccaceae	1	1	-	-	1	1
109. Dioscoreaceae	1	4	-	-	1	4
110. Smilacaceae	1	1	-	-	1	1
111. Liliaceae	5	5	2	2	7	7
112. Pontederiaceae	1	1	-	-	1	1

contd.

Table No. 6.1 (Contd.)

Name of the family	Number of wild		Number of cultivated		Total	
	Gene- ra	Spe- cies	Gene- ra	Spe- cies	Gene- ra	Spe- cies
113. Commelinaceae	3	8	2	2	5	10
114. Arecaceae	3	3	3	3	6	6
115. Pandanaceae	1	1	-	-	1	1
116. Araceae	3	5	3	3	6	8
117. Lemnaceae	2	2	-	-	2	2
118. Alismaceae	1	1	-	-	1	1
119. Potamogetonaceae	2	4	-	-	2	4
120. Eriocaulaceae	1	4	-	-	1	4
121. Cyperaceae	11	25	-	-	11	25
122. Poaceae	29	39	5	5	31	44

Table No.6.2 : Statistical Synopsis of the Flora

	Dicots		Monocots		Total
	%	No.	%	No.	
Families	80.17	97	19.83	24	121
Genera	73.01	363	26.99	98	461
Species	78.43	520	21.57	143	663

The ratio of species belonging to Monocots and Dicots is 1:3.6; of genera 1:3.7 and of families 1:4. It is interesting to note the proportion of genera to species. In the whole of India it is 1:7, while in the area under investigation it is 1:1.43. This confirms to the general rule that, within the same floral region, the smaller the flora, the smaller the genus species ratio.

Except for Cyperaceae and Poaceae, the Monocotyledons are poorly represented. From 143 species of monocots 69 species belong to the families mentioned above, while remaining 74 species belong to 22 other families.

Hundred species belonging to 90 genera of Dicots are found under cultivation, whereas 19 species belonging to 19 genera of Monocots.

The first ten dominant families of the area under consideration are given in table No.6.2 and the same are compared with those of Bombay Presidency and of entire India.

The comparison clearly indicates that the dominant families from the Kanakeshwar area are almost parallel with those from flora of Bombay. However, the order of dominance differs of that of Flora of India; Family Orchidaceae that occupies the first rank in Flora of India does not come into the picture at all.

Table 6.3 : Dominant families in the area under consideration, Bombay Presidency and India as a whole

	Kanakeshwar	Bombay (Cook 1901)	India (Hooker 1907)
I	Fabaceae	Leguminosae	Orchidaceae
II	Poaceae	Gramineae	Leguminosae
III	Asteraceae	Compositae	Gramineae
IV	Euphorbiaceae	Euphorbiaceae	Rubiaceae
V	Acanthaceae	Acanthaceae	Euphorbiaceae
VI	Cyperaceae	Cyperaceae	Acanthaceae
VII	Malvaceae	Convolvulaceae	Compositae
VIII	Caesalpiniaceae	Orchidaceae	Cyperaceae
IX	Convolvulaceae	Rubiaceae	Labiatae
X	Rubiaceae	Malvaceae	Urticaceae

In the order of dominance, Malvaceae, Caesalpiniaceae and Convolvulaceae have gained the position above the family Rubiaceae in the Flora of Kanakeshwar