

EPIPHYTISM IN BROMELIACEAE: A SYNOPSIS

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ABSTRACT. The family Bromeliaceae contains 1692 epiphytic species out of a total of 3047 species; 55.5% of the species are epiphytes based on figures compiled in 2003.

Key words: Bromeliaceae, life form, epiphyte

INTRODUCTION

Several years ago (2003), in response to repeated queries regarding epiphytism (plants growing on plants), in the Bromeliaceae, Luther compiled records for the following table (TABLE 1), which contains absolute numbers and percentages of epiphytic species in the family divided into three subfamilies and fifty-seven genera. The taxonomic entities used are, for the most part, recorded in the Alphabetical List of Bromeliad Binomials (Luther 2002). Life form or habit information is from several sources:

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TABLE 1. Taxonomic distribution of epiphytism in Bromeliaceae.

Subfamily/Genus name	Total species	Epiphytic species	Percent epiphytes
BROMELIOIDEAE			
<i>Acanthostachys</i>	2	2	100.0
<i>Aechmea</i>	242	196	81.0
<i>Ananas</i>	7	0	0.0
<i>Andrea</i>	1	0	0.0
<i>Androlepis</i>	1	1	100.0
<i>Araeococcus</i>	6	6	100.0
<i>Billbergia</i>	65	61	93.8
<i>Bromelia</i>	56	3	5.4
<i>Canistropsis</i>	11	9	81.8
<i>Canistrum</i>	12	11	91.7
<i>Cryptanthus</i>	58	0	0.0
<i>Deinacanthos</i>	1	0	0.0
<i>Disteganthus</i>	2	0	0.0
<i>Edmondoa</i>	3	3	100.0
<i>Fascicularia</i>	1	1	100.0
<i>Fernseea</i>	2	1	50.0
<i>Greigia</i>	33	1	3.0
<i>Hohenbergia</i>	56	40	71.4
<i>Hohenbergiopsis</i>	1	1	100.0
<i>Lymania</i>	7	7	100.0
<i>Neoglaziovia</i>	3	0	0.0
<i>Neoregelia</i>	110	86	78.2

TABLE 1. Continued.

Subfamily/Genus name	Total species	Epiphytic species	Percent epiphytes
<i>Nidularium</i>	45	36	80.0
<i>Ochagavia</i>	4	1	25.0
<i>Orthophytum</i>	38	0	0.0
<i>Portea</i>	9	8	88.9
<i>Pseudaechmea</i>	1	1	100.0
<i>Pseudananas</i>	1	0	0.0
<i>Quesnelia</i>	17	13	76.5
<i>Ronnbergia</i>	14	14	100.0
<i>Ursulaea</i>	2	1	50.0
<i>Wittrockia</i>	6	6	100.0
TOTAL	817	509	62.3
PITCAIRNIOIDEAE			
<i>Ayensua</i>	1	0	0.0
<i>Brewcaria</i>	6	0	0.0
<i>Brocchinia</i>	20	3	15.0
<i>Connellia</i>	6	0	0.0
<i>Cottendorfia</i>	1	0	0.0
<i>Deuterocohnia</i>	17	0	0.0
<i>Dyckia</i>	127	0	0.0
<i>Encholirium</i>	21	0	0.0
<i>Fosterella</i>	30	0	0.0
<i>Hechtia</i>	48	0	0.0
<i>Lindmania</i>	38	0	0.0
<i>Navia</i>	92	3	3.3
<i>Pepinia</i>	56	10	17.9
<i>Pitcairnia</i>	325	80	24.6
<i>Puya</i>	216	0	0.0
<i>Steyerbromelia</i>	6	0	0.0
TOTAL	1010	96	9.5
TILLANDSIOIDEAE			
<i>Alcantarea</i>	18	0	0.0
<i>Catopsis</i>	18	18	100.0
<i>Glomeropitcaimia</i>	2	2	100.0
<i>Guzmania</i>	201	178	88.6
<i>Mezobromelia</i>	9	9	100.0
<i>Racinaea</i>	58	58	100.0
<i>Tillandsia</i>	576	525	91.1
<i>Vriesea</i>	254	215	84.6
<i>Werauhia</i>	84	82	97.6
TOTAL	1220	1087	89.1
Totals for Family	3047	1692	55.5

- 1). Personal observances based on more than thirty years of fieldwork in bromeliad habitats by the corresponding author.
- 2). Herbarium records especially at but not limited to the Marie Selby Botanical Gardens herbarium (SEL).
- 3). The taxonomic files maintained at the Mulford B. Foster Bromeliad Identification Center at the Marie Selby Botanical Gardens.
- 4). Extensive correspondence and conversations with colleagues with field experience.

Taxa that were recorded as epiphytes may be facultative or obligate epiphytes. Obligate lithophytes (i.e., certain tillandsias or *Alcantarea*) were not included nor were accidental epiphytes (i.e., *Ananas comosus*). A population of a taxon which included individuals growing on the ground, on rocks, and in trees (certain *Nidularium* spp.) was treated as an epiphyte. This list must be considered conservative, as poorly known taxa without any definite records of epiphytism have not been included as epiphytes, even if their close relatives are epiphytes.

This survey supersedes those given by Madison (1977), Kress (1986), and Gentry and Dod-

son (1987). Although many additional species have been described since this listing was compiled, the percentage of epiphytism remains very similar. With more than 55% of species epiphytic, the Bromeliaceae remains one of the most important families containing epiphytes.

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