## 2685-654 2

# THE CARNIVOROUS PLANTS

7

3

#### Dr B.E. Juniper

Department of Plant Sciences University of Oxford South Parks Road Oxford OX1 3RA

#### Dr R.J. Robins

Agricultural & Food Research Council Institute of Food Research Colney Lane Norwich NR4 7UA

### Dr D.M. Joel

Department of Weed Research Agricultural Research Organization Newe-Ya'ar Experiment Station Israel 31999



#### ACADEMIC PRESS

Harcourt Brace Jovanovich, Publishers

London San Diego New York Berkeley Boston Sydney Tokyo Toronto

## Contents

Preface					
Glossary: the carnivorous genera, authorities					
and origin of the names					
Abbreviations					
PART I. INTRODUCTION: THE					
SYNDROME AND THE HABITAT					
Chapter 1.	The carnivorous syndrome	3			
Chapter 2.	The history of the study of				
	carnivorous plants	12			
Chapter 3.	The habitats of carnivorous				
	plants and their regional				
	distribution	21			
PART II. ATTRACTION AND					
TRAPPING					
Chapter 4.	General morphological and				
	anatomical features of the traps	10			
	of carnivorous plants	49			
Chapter 5.	Attracting and retaining	74			
Chanton (	systems of carnivorous plants	74 86			
Chapter 6.	Trapping mechanisms	00			
PART III. NUTRITION AND					
		127			
Chapter 7.	The exploited prey and its nutritional value	120			
Chapter 8.		129			
Chapter 0.	The digestive glands and the secretion of digestive fluids	147			
Chapter 9.	The hydrolytic environment	117			
	and processes of digestion	189			
Chapter 10.	The absorption of the products				
-	of digestion	208			

Ĵ

ix	PART IV. PHYTOCHEMICAL ASPECTS 2		
xi		Phytochemicals The role of phytochemicals in	229
cii	Chapter 13.	carnivory Herbal and medicinal uses of carnivorous plants	241 244
1 3	PART V. EX MUTUALIS	XPLOITATION AND M	249
12	Chapter 14.	The associated fauna (Inquilines) and flora of carnivorous plants: the	
21		carnivorous plant as a phytotelm.	251
	Chapter 15.	Pollination and reproductive	
47	Chapter 16.	strategies Mimicry or mutualism?	270 275
49	PART VI. EVOLUTION		281
+9 74 86	Chapter 17.	The fossil record, the evolution of the carnivorous syndrome and the phylogenetic tree	283
27	Chapter 18.	Features of the carnivorous syndrome in non-carnivorous plants and general aspects of their possible avalution	291
29	Chapter 19.	their possible evolution The evolution of features of carnivory as seen in the current	271
47		flora	302
	Appendices		311
89	References		317
28	Index		344