

# The Fascination with Carnivorous Plants in Juvenile Literature

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## Introduction

Carnivorous plants have received much attention even since Charles Darwin's Insectivorous plants (1875, 2nd 1888 rev. by Francis Darwin). The most recent contribution is B. E. Juniper, R. J. Robins, and D. M. Joel's The carnivorous plants (Academic Press, London, 1989, xii, 353 pp., B&W illus.), a superb and most scholarly treatise. Adrian Slack's excellent Carnivorous plants recently received a limited revision (Alphabooks, London, 1988, 240 pp., B&W and color illus., original editions by Ebury Press, London, 1979, The MIT Press, Cambridge, Massachusetts, 1980, both also 240 pp.). However, juvenile literature (juvenilia) on plant carnivory has not been neglected. There are in English at least ten fairly recent juvenile books on carnivorous plants (hereafter "CPs" except in titles of works). Nine of these have been systematically listed in CPN's annual "list of CP books" since its initiation in 1976 (5:17); Rahn's book has not been listed. The ten juvenilia on CPs are listed below and include the following information:

- (1) complete bibliographic details, including ISBN/price information and publisher's detailed address if in print (information was verified with publishers in Oct. 1989);
- (2) a listing of their chapter headings (the spelling of authors is retained) to indicate both the contents and the flavor of the book, including in brackets an indication of the plant and fungal organisms treated (see Table 1, note 1, for abbreviations of genera);
- (3) citation of published reviews in CPN, Appraisal: Science books for young people (1967-date), or BRD (Book review digest, H. W. Wilson Co., New York), the last work a compilation available in most public libraries (I do not cite CPN's annual "list of CP books") [Appraisal has dual reviews from the viewpoints of a librarian and a specialist, who each rate the work: E = excellent; VG = very good; G = good; F = fair; U = unacceptable; Q = qualification or explanation necessary];
- (4) my commentary, including notation of age level (usually taken from Appraisal, occasionally from BRD).

The following ten juvenilia are discussed alphabetically by author. Tables 1-2 list the works and give comparative information on their scientific contents (Table 1) and bibliographic details (Table 2).

## Juvenilia on carnivorous plants

- (1) **Bentley, Linna.** 1968. Plants that eat animals. Illustrations by Colin Threadgall. McGraw-Hill Book Co., New York. 31, [1] pp., illus. (B&W, color paintings), color endpaper illus. [A McGraw-Hill Natural Science Picture Book. Also published by The Bodley Head, London, 1967.] Out-of-print.

Contents: plants that catch animals; four plant traps; simple sticky-surface traps—the butterworts [Pi]; sticky-surface traps with tentacles—the sundews [Dr, Drp, By]; the sundew trap in action; the deadly jug-of-water trap—pitcher plants (the Australian pitcher plant; the American pitcher plant; an American pitcher plant in action; the tropical pitcher plants) [Ce, He, Da, Sa, Ne]; the lightning snap trap—venus

fly trap [Di]; the snap trap in action; suction traps—the bladderworts [Ut]; suction traps—the underwater bladderworts [Ut]; the suction trap in action; botanical gardens; no index.

Reviews: M. H. Perkins and F. Sherburne, Appraisal 2(3):4 (1969) (VG/VG, ages 8-12); various authors, BRD 65:102 (1969).

Comments: Intended for ages 8-12, this work is in appealing picture-book format, 25 x 19 cm., and thus has rather skimpy text. Curiously, however, scientific names are used throughout (Chrysamphoa is used for Darlingtonia), and the treatment is worldwide. The rather stylized color and black-and-white illustrations by Colin Threadgall make this work artistically much superior to most of the juvenilia mentioned here except for Lerner's work, which has realistic watercolors, and Overbeck's and Wexler's atlases, which have superb photography. Admirably, Bentley's coverage of CPs is worldwide.

(2) **Dean, Anabel.** 1977. Plants that eat insects: A look at carnivorous plants. Illustrations by L'Enc Matte. Lerner Publications Co., Minneapolis. 32 pp., illus. (B&W sketches, color covers). Out-of-print.

Contents: meat-eating plants; the Venus's-flytrap [Di]; sundews [Dr]; butterworts [Pi]; bladderworts [Ut]; fungi [Arthrobotrys]; pitcher plants (common pitcher plant; cobra plant) [Sa, Da]; no index.

Reviews: A. L. Phillips and R. G. Belcher, Appraisal 10(3):16 (1977) (VG/VG, ages 10 and up).

Comments: Intended for ages 10 up, this fairly elementary work has brief text supported by L'Enc Matte's simple sketches. Scientific names are not used. The novelty of this book on CPs is that for one aimed at a lower age level it also covers fungi predaceous on nematodes.

(3) **Goldstein, Philip.** 1974. Animals and plants that trap. Illustrations by Matthew Kalmenoff; photographs from various sources. Holiday House, New York. 118, [10] pp., illus. (B&W sketches, photographs). Out-of-print.

Contents: a better mousetrap; adaptation—the secret of survival; an unusual insect trap [Arum]; a very effective pitfall [ant lion]; the snap-trap of Venus [Di]; the web of the caddis worm; walk into my parlor [spiders]; the sparkling dewdrop trap [Pi, Dr]; the stringing-cell trap [hydra]; faster than the eye can see [Ut]; the fish that goes fishing [anglerfish, batfish, etc.]; the death pit [Ne, Sa]; a lasso for an eelworm [Arthrobotrys and other fungi]; annotated 5-page bibliography; 5-page index.

Reviews: none in Appraisal, BRD, or CPN.

Comments: Intended for ages 12-18 (my estimate as there are no reviews), this detailed work covers the same topics as Rahn, often in a more thorough fashion. This work has many good illustrations by Matthew Kalmenoff and several fine photographs borrowed from various sources. Unfortunately, there is no overview on trap mechanisms, and accounts of plants and animals are curiously integrated. Scientific names are used.

(4) **Lerner, Carol.** 1983. Pitcher plants: The elegant insect traps. Illustrations by the author. William Morrow and Co., New York. 63, [1] pp., illus. (B&W sketches, watercolors). ISBN 0-688-0171707, \$12.95, ISBN 0-688-01718-5 (library binding), \$12.88 (from William Morrow and Co., 105 Madison Ave., New York, New York 10016, 800-843-9389).

Contents: plants of prey; pitcher plants (where they grow; the pitcher leaf; some leaf variations; pitcher flowers); prey and parasites (the victims; the plunderers; a special relationship); epilogue; 2-page glossary; collections of pitcher plants open to the public; 3-page index; bionote. Mostly on North American Sarracenaceae (Da, Sa), but with sketches and very brief mention of other North American CPs (Di, Dr, Ut).

Reviews: R. G. Beebe and C. C. Truesdell, Appraisal 16(3):38-39 (1983) (E/G, ages 10-15); various authors, BRD 79:866 (1983); D. E. Schnell, CPN 12:53 (1983).

Comments: Intended for ages 10-15, this is a superb and handsomely illustrated discussion of the nine species (scientific names are given) of North American Sarraceniacae. In its treatment of "plumderers," that is, insects eating the "eaters," this work covers a topic not usually treated in books on plant carnivory. Lerner's seven watercolor paintings of the nine species are very elegant. There are also many clear B&W drawings and one map.

(5) **Overbeck, Cynthia**. 1982. Carnivorous plants. Photographs by Kiyoshi Shimizu. Adapted from a translation by Chaim Uri of Kiyoshi Shimizu's Shokuchū shokubutsu (1975). Lerner Publications Co., Minneapolis. 48 pp., illus. (color photographs, color covers). [A Lerner Natural Science Book] ISBN 0-8225-1470-2 (trade/library binding), \$12.95, ISBN 0-8225-9535-4 (paperbound), \$4.95 (from Lerner Publications Co., 241 First Avenue, Minneapolis, Minnesota 55401, 800-328-4929).

Contents: no chapter headings used; 1-page glossary; 1-page index. On Al, Di, Dr, Ne, Pi, Sa, and Ut.

Reviews: R. S. Beebe and G. O. Blough, Appraisal 16(1):64-65 (1983) (Q/VG, ages 10-12).

Comments: Intended for ages 10-12, the entire A Lerner Natural Science Book series (11 books on plants, 25 on animals) comprises adaptations from various Japanese juvenilia. All works sport excellent and intricate color photographs. Unfortunately, scientific names are not used in Overbeck's Carnivorous plants, which is clearly written. Shimizu's color photographs are very fine and the ones of waterwheel (Aldrovanda vesiculosa) are the best I have seen, indeed a most significant contribution to the "very limited literature" on this monotypic plant lamented by B. E. Juniper et al. in The carnivorous plants (1989:17). Juniper et al. actually cite Overbeck on p. 53.

(6) **Poole, Lynn and Gray Poole**. 1963. Insect-eating plants. Illustrations by Christine Sapieha. Thomas Y. Crowell Co., New York. [vii], 87, [1] pp., illus. (B&W sketches). Out-of-print.

Contents: eaten alive!; diet of insects; Venus' flytraps [Di]; sundews (including butterworts) [Dr, Pi]; pitcher plants [Sa]; the cobra [Da]; bladderworts [Ut]; fungus with lasso [Arthrobotrys]; terrarium; care and feeding; keeping a record; 4-page index; bionote.

Reviews: various authors, BRD 60:942 (1964).

Comments: Intended for ages 10-13, this work has clear and often lively discussion married to very mediocre sketches by Christine Sapieha. The last three chapters on growing and experimenting with CPs are very thorough. Scientific names are general used.

(7) **Prince, Jack Harvey ("J. H.")**. 1979. Plants that eat animals. Illustrations and photographs by the author. Thomas Nelson, Publishers, Nashville. 92 pp., illus. (B&W diagrams, photographs). Out-of-print.

Contents: introduction; classification of CPs (glands, digestion, enzymes, osmosis); underwater traps (bladderworts) [Ut, Bi, Po, Al, Gel]; pitfall traps (pitcher plants) [Ne, Ce, Sa, Da, Hel]; flypaper traps (sundews; rainbow plants; butterworts) [Dr, Drp; By; Pi]; snap traps (Venus's-flytrap) [Di]; predaceous fungi (adhesive fungi; ring traps; penetration by spores; bait traps) [Arthrobotrys, etc.]; vase traps (Aechmea, etc.—see comments following); growing CPs at home (Venus's-flytraps; sundews; pitfall traps; butterworts; bladderworts; bromeliads); 1-page bibliography; 2-page glossary; 2-page list of 75 scientific names; 6-page index.

Reviews: M. Bush and W. D. Perkins, Appraisal 12(3):45-46 (1979) (F/F, ages 8-12); various authors, BRD 76:978 (1980).

Comments: This work, which is intended for ages 8-12 according to Appraisal but more accurately, I think ages 12-18 according to BRD, is quite detailed and has a good introductory chapter placing things in perspective. However, it suffers from the author's unimpressive diagrams and photographs. In addition, the text is dry and often difficult, indeed probably too textbookish for many juveniles. Scientific names are used; common names used in the text are number-referenced to a so-called glossary of scientific names. Prince treats CPs, predaceous fungi, and bromeliad tank plants, the last curiously called "vase traps". The bromeliaceous genera mentioned are not carnivorous, that is, the probably carnivorous Brocchinia and Catopsis of Bromeliaceae (see Juniper et al.'s The carnivorous plants, 1989).

(8) Rahn, Joan Elma. 1980. Traps & lures in the living world. Illustrations and photographs by the author. Atheneum, New York. [vii], 94 pp., illus. (B&W diagrams, photographs). Out-of-print.

Contents: introduction; "will you walk into my parlor?" [spiders, caddis fly, ant lion]; CPs and predaceous fungi [Di, Ut, Sa, Da, Pi, Dr, Arthrobotrys]; tender traps [Calycanthus, Aristolochia]; femmes fatales, fishing fish, and others that lure ["solar furnace" plants—Geum, Papaver; Stapelia carrion flowers; various animals (fireflies, fungus gnats, flashlight fish, angler fish, bolas spikers, crab spider)]; 7-page glossary; 3-page index.

Reviews: various authors, BRD 77:1171 (1981).

Comments: Intended for ages 11-14, this book is broader, treating not only the usual CPs but also trap flowers and fungi (Arthrobotrys) predaceous on nematodes. The book, with several photographs and many very prosaic diagrams by the author, has a very good glossary. Scientific names are only very occasionally used.

(9) Waters, John Frederick ["John F."]. 1974. Carnivorous plants. Illustrations and photographs from various sources. Franklin Watts, New York. [viii], 60, [1] pp., illus. (B&W diagrams, artwork, photographs, color covers). [A First Book] Out-of-print.

Contents: what is a plant?; what is a CP?; pitcher plants [Sa, Da, Ne]; bladderworts [Ut]; sundews [Dr, Drp]; the Venus flytrap [Di]; butterworts [Pi]; animal-capturing fungi [Arthrobotrys, etc.]; 2-page glossary; 1-page bibliography; 2-page index; bionote.

Reviews: J. C. Botsford and P. B. Care, Appraisal 8(3):38 (1975) (E/VG, ages 9-12); none in BRD or CPN; notice by D. E. Schnell and J. A. Mazrimas, CPN 4:52 (1975), refers to the "many . . . fanciful" "line drawings".

Comments: Intended for ages 9-12, this work is nicely illustrated with five photographs by Charles Phelps Cushing and many paintings, diagrams, and photographs borrowed from the Field Museum of Natural History, Chicago, and the New York Public Library; unfortunately the originals are not noted. A two-page spread curiously depicts eight epiphytes, including Dischidia rafflesiana complete with its German captions. Scientific names are liberally used (Chrysamphora is used for Darlingtonia). The bibliography given is not on CPs!

(10) Wexler, Jerome. 1981. Secrets of the Venus's fly trap. Photographs by the author. Dodd, Mead & Co., New York. [64] pp., illus. (B&W photographs). Out-of-print.

Contents: the trap; the plant; reproduction; growing your own; no index. On Di only.

Reviews: H. Kent and P. Stowe, Appraisal 15(1):67 (1982) (VG/G, ages 8-12); various authors, BRD 77:1513-1514 (1981); S. E. Williams, CPN 10:82-83 (1981).

Comments: This picture also intended for ages 8-12 was done by Jerome Wexler, a very prolific contributor to botanical literature both as an author and especially as a photographer. The atlas contains some very excellent, indeed stunning, photography along with a straightforward discussion of the morphology and trap mechanism of Venus flytrap (*Dionaea muscipula*). Scientific names are not used, and the pages are unnumbered.

## Conclusions

The aforementioned books are entirely or substantially on CPs. However, this subject naturally also receives brief mention in various encyclopedia-type works. Some examples: (1) Mark Lambert's *Plant life* (Warwick Press, New York, 1983, 91, [4] pp., color illus., ISBN 0-531-09216-X, \$8.00, *A Gateway Fact Book*, grades 4-6, from Franklin Watts, 387 Park Avenue South, New York, New York 10016) has two pages (pp. 46-47) of very simple color illustrations on "plants that eat animals"; for review see R. S. Beebe and R. G. Belcher, *Appraisal* 17(2):26 (1984) (VG/G, ages 9-14). (2) David Black and Anthony Huxley's *Plants* (Facts on File Publications, 460 Park Avenue South, New York, New York 10016, 1985, 64 pp., color illus., ISBN 0-8160-1065-X, \$14.95, *The World of Science* series, grades 3-6, also Orbis Publishing, London) has a two-page spread (pp. 54-55) on CPs, with some beautiful photographs; for review see B. C. Scotto and P. Stowe, *Appraisal* 19(4):23-24 (1986) (E/VG, ages 10-14). (3) World Book staff's *The plant world* (World Book, Chicago, Illinois, 1985, 159 pp., color illus., no ISBN, *The World Book Encyclopedia of Science* series, not available individually, series ISBN 0-7166-3192-X, 8-vol. set \$90.00, grades -12) is an extensive treatment of the plant and fungal kingdoms, with emphasis on ecology and plant products, but sporadically treats CPs (pp. 61, 65, 81), including some excellent color photographs of *Dionaea*, *Drosera*, and *Utricularia* (pp. 79, 80, 107).

In addition, works focusing on other topics of botany may briefly treat CPs. (1) Ware T. Budlong's *Performing plants* (Simon & Schuster, New York, 1969, 96 pp., B&W sketches by Grambs Miller) has a seven-page chapter on CPs (pp. 25-31) covering Venus flytrap, butterworts, sundews, and pitcher plants; for review see F. Doughty and F. Sherburne, *Appraisal* 2(3):6-7 (1969) (G/VG, ages 12 up). (2) Dorothy Childs Hogner's *Water plants* (Holiday House, New York, 1977, 96 pp., B&W illus.) has a photograph and sparse description (pp. 34-36) of *Utricularia*; for review see R. Alkema and R. G. Belcher, *Appraisal* 12(1):17-18 (1979) (F/G, ages 9-12). (3) Laurence Pringle's *Water plants* (Thomas Y. Crowell, New York, 1975, 35 pp., color illus. by Kazue Mizumura) similarly considers bladderwort; for review see J. Gulovsen and P. B. Care, *Appraisal* 9(2):34 (1976) (VG/VG, ages 5-10).

Tables 1 and 2 give comparative data on the ten juvenile books on CPs discussed above. Most works treat the prerequisite six American genera, namely, Venus flytrap, bladderworts, butterworts, sundews, pitcher plants, and cobra lily, respectively, *Di*, *Ut*, *Pi*, *Dr*, *Sa*, and *Da* in Table 1. Some of these works (e.g., Bentley, Goldstein, Overbeck, Prince, Waters) also treat Australian or tropical CPs, whereas two books are more restrictive in treating only a few CPs (Lerner on North American Sarracenaceae, Wexler on *Dionaea*). Interestingly, the two works treating the greatest number of genera of CPs are the most advanced (Prince) and among the most elementary (Bentley). None of these juvenilia consider *Triphyophyllum*, Bromeliaceae, and other recent examples of CPs discussed in Slack (1988) and Juniper et al. (1989). Surprisingly, only two books (Bentley, Lerner) list public collections of CPs, and only five (Goldstein, the Pooles, Prince, Waters, Wexler) give information on cultivating CPs (Table 1).



Six works, those by Dean, Goldstein, the Pooles, Prince, Rahn, and Waters, extend beyond CPs and treat not only other plants, but also fungi and animals (Table 1). The aforementioned six books consider various fungi predaceous on animals, a topic, incidentally, that was not part of my education until fairly recently. Waters's efforts briefly considers epiphytes and plants in general. And three works are the most broad (Table 1), treating not only trap flowers such as Aristolochia and other types of plants (Goldstein, Prince, Rahn), but also various animals that lure and trap (Goldstein, Rahn).

Table 2 compares various bibliographic details for these ten juvenilia on CPs. Several books aimed at the lower age levels (Bentley, Dean, Wexler) lack indices. Two of these (Dean, Wexler) and, surprisingly, an otherwise excellent advanced book (Overbeck) do not give scientific names. Table 2 shows well how spotty juvenilia can be with such essentials for science books as glossaries and bibliographies. Goldstein's five-page, annotated bibliography and Rahn's seven-page glossary are especially commendable.

The two most recent works (Lerner, Overbeck) as well as a 1968 book (Bentley) are partly or entirely in color. Except for color covers or dust jackets, the remaining seven items (Table 2) are strictly in black-and-white. This tendency toward color production parallels the trend in juvenilia on other topics (see R. Schmid, 1990, some recent botany books for children and young adults, especially the artistry of Carol Lerner and Anne Ophelia Todd Dowden, Taxon 39:81-92).

The topic of the CPs is one especially susceptible to sensationalistic language, particularly in literature for juveniles and the adult public. Fortunately, the juvenilia discussed here are reasonably good in this matter, as are, in fact, most recent science juvenilia [G. O. Blough, 'Even better than jelly beans', Appraisal 6(2):1-4 (1973)]. Unfortunately, three of the works (Bentley, Dean, Prince, published, respectively, 1968, 1977, 1979) in their titles, plus the Lambert encyclopedia discussed above, use that hoary word "eat". This usage "eat" is notably bad because the word is popularly defined as "to take in through the mouth as food: ingest, chew, and swallow in turn" (Webster's 9th New Collegiate Dictionary, 1983). Fortunately, the two most recent works (Lerner, Overbeck) are exemplary in using scientifically accurate language.

Predictably, juvenilia on CPs rarely receive mention in more specialized works on the subject. Of the ten juvenilia discussed here, Juniper et al.'s (1989) recent The carnivorous plants cites only Overbeck's atlas for its superb pictures of Aldrovanda. Slack (1988) cites none of these juvenilia.

While some of the juvenilia discussed above are at a fairly elementary level (see "age" notations above and in Table 2), most are at an appreciably higher, even "young adult" level. Libraries and publishers commonly divide juvenile literature into "children's literature" for preschool through age 12 (grade six) and "young adult literature" for ages 12-18 (grades 7-12). Several works discussed here, for instance Lerner's Pitcher plants, Overbeck's Carnivorous plants, and Wexler's Secrets of the Venus's fly trap would not be out of place in college or university taxonomy or morphology classes to depict the various taxa treated. These three works have especially fine illustrations, respectively, watercolor paintings, color photographs, and black-and-white photographs. The advantage of using juvenilia in college or university teaching is that such works are very visual—long on pictures and short on words, the reverse of treatments in adult and technical works. If necessary, one can make an aside to the students to enjoy the illustrations but not to be offended by the elementary text.

TABLE 1. COMPARATIVE DATA ON SCIENTIFIC CONTENTS OF THE TEN JUVENILE BOOKS ON CARNIVOROUS PLANTS<sup>1</sup>

Author(s) (year)	Cult.	Collec.	A1	Bi	Br	By	Ce	Da	Di	Dr	Drp	Ge	He	Ma	Ne	Pi	Po	Sa	Tr	Ut	Pls	Fun	Ani	
Bentley (1968)		yes				By <td>Ce<td>Da<td>Di<td>Dr<td>Drp<td>He</td><td></td><td></td><td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td></td><td></td></td></td></td></td></td></td></td>	Ce <td>Da<td>Di<td>Dr<td>Drp<td>He</td><td></td><td></td><td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td></td><td></td></td></td></td></td></td></td>	Da <td>Di<td>Dr<td>Drp<td>He</td><td></td><td></td><td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td></td><td></td></td></td></td></td></td>	Di <td>Dr<td>Drp<td>He</td><td></td><td></td><td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td></td><td></td></td></td></td></td>	Dr <td>Drp<td>He</td><td></td><td></td><td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td></td><td></td></td></td></td>	Drp <td>He</td> <td></td> <td></td> <td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td></td><td></td></td></td>	He			Ne <td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td></td><td></td></td>	Pi <td></td> <td>Sa</td> <td></td> <td>Ut</td> <td></td> <td></td> <td></td>		Sa		Ut				
Dean (1977)										Da <td>Di<td>Dr</td><td></td><td></td><td></td><td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td>Fun</td><td></td></td></td>	Di <td>Dr</td> <td></td> <td></td> <td></td> <td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td>Fun</td><td></td></td>	Dr				Pi <td></td> <td>Sa</td> <td></td> <td>Ut</td> <td></td> <td>Fun</td> <td></td>		Sa		Ut		Fun		
Goldstein (1974)	yes									Di <td>Dr</td> <td></td> <td></td> <td></td> <td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun<td>Ani</td></td></td></td></td>	Dr				Ne <td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun<td>Ani</td></td></td></td>	Pi <td></td> <td>Sa</td> <td></td> <td>Ut</td> <td>Pls<td>Fun<td>Ani</td></td></td>		Sa		Ut	Pls <td>Fun<td>Ani</td></td>	Fun <td>Ani</td>	Ani	
Lerner (1983)		yes							Da	x <sup>2</sup>	x <sup>2</sup>							Sa		x <sup>2</sup>				
Overbeck (1982)			A1							Di <td>Dr</td> <td></td> <td></td> <td></td> <td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td></td><td></td></td></td>	Dr				Ne <td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td></td><td></td></td>	Pi <td></td> <td>Sa</td> <td></td> <td>Ut</td> <td></td> <td></td> <td></td>		Sa		Ut				
the Pooles (1963)	yes!									Da <td>Di<td>Dr</td><td></td><td></td><td></td><td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td>Fun</td><td></td></td></td>	Di <td>Dr</td> <td></td> <td></td> <td></td> <td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td></td><td>Fun</td><td></td></td>	Dr				Pi <td></td> <td>Sa</td> <td></td> <td>Ut</td> <td></td> <td>Fun</td> <td></td>		Sa		Ut		Fun		
Prince (1979)	yes!		A1 <td>Bi</td> <td></td> <td>By<td>Ce<td>Da<td>Di<td>Dr<td>Drp<td>Ge<td>He</td><td></td><td>Ne<td>Pi<td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td></td></td></td></td></td></td></td>	Bi		By <td>Ce<td>Da<td>Di<td>Dr<td>Drp<td>Ge<td>He</td><td></td><td>Ne<td>Pi<td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td></td></td></td></td></td></td>	Ce <td>Da<td>Di<td>Dr<td>Drp<td>Ge<td>He</td><td></td><td>Ne<td>Pi<td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td></td></td></td></td></td>	Da <td>Di<td>Dr<td>Drp<td>Ge<td>He</td><td></td><td>Ne<td>Pi<td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td></td></td></td></td>	Di <td>Dr<td>Drp<td>Ge<td>He</td><td></td><td>Ne<td>Pi<td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td></td></td></td>	Dr <td>Drp<td>Ge<td>He</td><td></td><td>Ne<td>Pi<td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td></td></td>	Drp <td>Ge<td>He</td><td></td><td>Ne<td>Pi<td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td></td>	Ge <td>He</td> <td></td> <td>Ne<td>Pi<td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td>	He		Ne <td>Pi<td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td>	Pi <td>Po<td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td>	Po <td>Sa</td> <td></td> <td>Ut</td> <td>Pls<td>Fun</td><td></td></td>	Sa		Ut	Pls <td>Fun</td> <td></td>	Fun		
Rahn (1980)										Da <td>Di<td>Dr</td><td></td><td></td><td></td><td></td><td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun<td>Ani</td></td></td></td></td>	Di <td>Dr</td> <td></td> <td></td> <td></td> <td></td> <td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun<td>Ani</td></td></td></td>	Dr					Pi <td></td> <td>Sa</td> <td></td> <td>Ut</td> <td>Pls<td>Fun<td>Ani</td></td></td>		Sa		Ut	Pls <td>Fun<td>Ani</td></td>	Fun <td>Ani</td>	Ani
Waters (1974)	yes									Da <td>Di<td>Dr<td>Drp</td><td></td><td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td></td>	Di <td>Dr<td>Drp</td><td></td><td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td></td>	Dr <td>Drp</td> <td></td> <td>Ne<td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td></td>	Drp		Ne <td>Pi<td></td><td>Sa</td><td></td><td>Ut</td><td>Pls<td>Fun</td><td></td></td></td>	Pi <td></td> <td>Sa</td> <td></td> <td>Ut</td> <td>Pls<td>Fun</td><td></td></td>		Sa		Ut	Pls <td>Fun</td> <td></td>	Fun		
Wexler (1981)	yes!																							

<sup>1</sup>Key to abbreviations: Information mostly from Juniper et al. (1939); numbers in parentheses indicate numbers of species in genera of CPs.

Cult. = information on cultivation of CPs; "!" indicates that a special chapter is devoted to cultivation.

Collec. = information on public collections of CPs

A1 = Aldrovanda (waterwheel)--Droseraceae) (1)

Ani = animals (see text)

Bi = Biovularia (Lentibulariaceae) (2)

Br = Bromeliaceous CPs (see text and Juniper et al., 1989)

By = Byblis (rainbow plant--Byblidaceae) (2)

Ce = Cephalotus (Australian pitcher-plant--Cephalotaceae) (1)  
 Da = Darlingtonia (cobra plant, cobra lily--Sarraceniaceae) (1)  
 Di = Dionaea (Venus's fly-trap--Droseraceae) (1)  
 Dr = Drosera (sundew--Droseraceae) (110)  
 Drp = Drosophyllum (Portuguese sundew, dewy-pine--Droseraceae) (1)  
 Fun = Arthrobotrys and other fungi (see text)  
 Ge = Genlisea (Lentibulariaceae) (15)  
 He = Heliamphora (sun-pitcher, marsh-pitcher--Sarraceniaceae) (5)  
 Ma = Martyniaceae CPs (see Juniper et al., 1989)  
 Ne = Nepenthes (pitcher-plant, Dutchman's pipe, monkey's cup--Nepenthaceae) (68)  
 Pi = Pinguicula (butterwort--Lentibulariaceae) (52)  
 Pls = plants other than CPs (see text)  
 Po = Polypompholyx (pink petticoat--Lentibulariaceae) (2)  
 Sa = Sarracenia (pitcher-plant, trumpet-leaf--Sarraceniaceae) (8)  
 Tr = Triphyophyllum (Dioncophyllaceae) (1) (see text, Juniper et al., 1939, and Slack, 1983)  
 Ut = Utricularia (bladderwort--Lentibulariaceae) (200)

<sup>2</sup>With sketches and very brief mention of these taxa.



TABLE 2. COMPARATIVE BIBLIOGRAPHIC DATA ON THE TEN JUVENILE BOOKS ON CARNIVOROUS PLANTS<sup>1</sup>

Author(s) (year)	Age level <sup>2</sup>	Number pages	Drawings <sup>3</sup>	Photos <sup>3</sup>	SciName Maps used	Glossary pages	Biblio. pages	Index pages
Bentley (1968)	8-12	32	B&W/color		yes			
Dean (1977)	10 up	32	B&W					
Goldstein (1974)	12-18	128	B&W	B&W	yes		5	5
Lerner (1983)	10-15	64	B&W/color		yes	yes	2	3
Overbeck (1982)	10-12	48		color		1		1
the Pooles (1963)	10-13	95	B&W		yes			4
Prince (1979)	12-18	92	B&W	B&W	yes	2	1	6
Rahn (1980)	11-14	101	B&W	B&W	yes	7		3
Waters (1974)	9-12	69	B&W	B&W	yes	2	1	2
Wexler (1991)	8-12	64		B&W				

<sup>1</sup>Values for "0" or "no" not indicated. "SciName used" means that at least generic names were used. See text for elaboration.

<sup>2</sup>Age levels taken from reviews in Appraisal (see text) except BRD used for the Pooles, Prince (Appraisal indicates less accurately ages 8-12), and Rahn, and my estimate for Goldstein.

<sup>3</sup>Excluding covers. Dean and Overbeck have color photographs on their covers, whereas Waters has color drawings on the covers.