

# CHROMOSOME NUMBER OF *BYBLIS LINIFLORA* SALISB. (BYBLIDACEAE)<sup>1</sup>

CHING-I PENG<sup>2</sup> AND ANN KENTON<sup>3</sup>

## ABSTRACT

Cytological studies of plants from two different sources cultivated at Missouri Botanical Garden, St. Louis and the Royal Botanic Gardens, Kew, suggest that *Byblis liniflora* Salisb. has a gametic chromosome number of  $n = 16$  instead of  $n = 12$  as reported by Kondo (1973). This previous and apparently erroneous report was cited in recent reviews of angiosperm chromosome numbers by Raven (1975) and Lewis (1980).

The carnivorous plant genus *Byblis* comprises 2 species: *B. gigantea* Lindl., a self-incompatible, moderately woody herb endemic to ephemeral swamps along sandy coastal plains in Western Australia (Morcombe, 1968), and *B. liniflora* Salisb., a smaller, self-compatible herb that is widespread across tropical Australia and that has recently been recorded in southern New Guinea (Steenis, 1968). The first chromosome count for this genus was made by Kress (1970), who reported  $2n = 18$  for *B. gigantea*. Later Kondo (1973) reported a different number,  $2n = 14$  for this species. In addition he reported  $2n = 24$  for *B. liniflora*.

The discrepancy in the reported number for *Byblis gigantea* and the large difference in chromosome numbers between the two closely related species inspired us to reexamine these taxa using plant materials that are available in our respective institutions. We do not have access to plants of *B. gigantea*, but we do have cultivated plants of *B. liniflora* from two different sources. The plants at Missouri Botanical Garden were grown from seeds received from Ms. Patrick Dwyer, St. Michael's Episcopal Church, Killeen Park, Albany, New York (MO accession number: 791501). The plants at the Royal Botanic Gardens, Kew, were grown from seeds obtained from the Insectivorous Society of Japan, and the stock originated from Western Australia (K accession number: 437-79-04433). Voucher specimens (Solomon 5668 and 437-79-04433) are preserved at MO and K respectively.

Meiotic counts prepared at Missouri Botanical Garden clearly show a haploid chromosome number of  $n = 16$  (Fig. 1). Numerous good cells were observed, and meiosis was regular in both diakinesis and metaphase I. Mitotic counts made at the Royal Botanic Gardens yielded a diploid number of  $2n = 32$  (Fig. 2). Our results are at variance with those reported by Kondo (1973) who received fixed root tips from plants grown by Mr. Joseph A. Mazrimas, Livermore, California. Initially we suspected the possibility of misidentification of these collections. However, photographs kindly sent by Mr. Mazrimas show that his plants were

<sup>1</sup> We are grateful to P. H. Raven for communicating with Mr. Joseph A. Mazrimas, locating Kondo's original paper and making valuable comments on the manuscript. We also thank P. Goldblatt and P. P. Lowry for critically reading the manuscript, and Mr. D. Bowling for growing *B. liniflora* in sterile culture at Kew. Permission to cite unpublished work by G. J. Keighery is greatly appreciated.

<sup>2</sup> Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166, U.S.A. After January 1, 1983, Institute of Botany, Academia Sinica, Taipei, Taiwan, R.O.C.

<sup>3</sup> Jodrell Laboratory, Royal Botanic Gardens, Kew, Richmond, Surrey, Great Britain TW9 3DS.



Peng, Ching-I and Kenton, Ann. 1982. "Chromosome Number of *Byblis Liniflora* Salisb. (Byblidaceae)." *Annals of the Missouri Botanical Garden* 69, 418–419. <https://doi.org/10.2307/2398948>.

**View This Item Online:** <https://www.biodiversitylibrary.org/item/87379>

**DOI:** <https://doi.org/10.2307/2398948>

**Permalink:** <https://www.biodiversitylibrary.org/partpdf/8258>

**Holding Institution**

Missouri Botanical Garden, Peter H. Raven Library

**Sponsored by**

Missouri Botanical Garden

**Copyright & Reuse**

Copyright Status: In copyright. Digitized with the permission of the rights holder.

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://biodiversitylibrary.org/permissions>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.