

Fig. 1. Diakinesis in a spore mother cell of *Onychium auratum* Kaulf. showing $n = 29$

intermedia Clarke⁷). The present material was collected near Tonglu Dak Bungalow (10,000 ft. alt.) on the Indo-Nepal border (Dist. Darjeeling). Meiosis, as studied from a large number of spore mother cells, reveals in each case 58 bivalents (Fig. 2) and is absolutely normal. In practically all the cases studied only eight mother cells are produced in a sporangium and 16-celled ones appear to be absent. The 8-celled sporangia later result in 32 spores, relatively much bigger than in the other two species. A somatic count of about 58 has also been possible from a young uncurling frond tip. It thus now becomes evident that it is a well-established obligate apogamous species and the doubling in the chromosomes could take place by the failure of premeiotic mitosis, followed by a regular course of meiosis resulting in unreduced spores. Further studies on spore germination, sporogenesis and taxonomy of the species are in progress.

The foregoing account clearly reveals that the basic number for the genus is 29, and of the three Himalayan species two are diploid and one diploid apogamous. It is significant to note here that this number is in line with other pteroid, adiantoid and cheilanthoid members reported earlier^{11,12}, and is equally shared by Holttum's⁴ Adiantaceae and Pterioideae. Of Bower's¹ primitive gymnochromoids, excluding *Cer-*

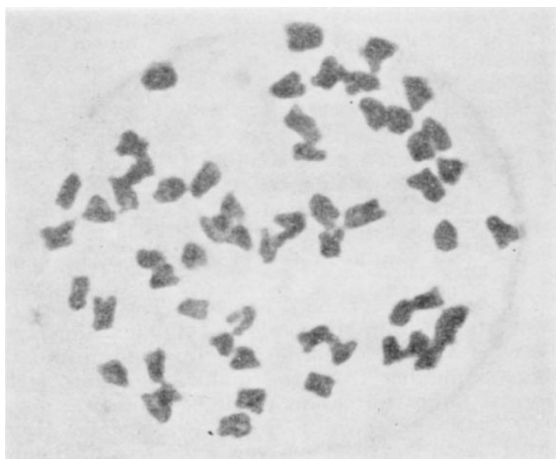


Fig. 2. Metaphase of the first meiotic division in a spore mother cell *Onychium contiguum* (Wall.) Hope showing $n = 58$

atopteris (discussed in detail by Ninan¹³), previously the cytology of *Cryptogramma* only was known ($n = 30$), which, however, exhibits the same variance as presented by adiantoid and cheilanthoid members. Furthermore, it seems pertinent to add that Bower's¹ contention of the origin of *Onychium* and related genera from some fern similar to *Todea* (osmundaceous stock, $n = 22$)¹¹, later supported by Holttum², remains still debatable and is discussed elsewhere.

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P. N. MEHRA
S. C. VERMA

Department of Botany,
Panjab University,
Amritsar.
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⁸ Clarke, C. B., *Trans. Linn. Soc.*, B, 1, 458 (1880).

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The 'Dawn Chorus' in Radio Observations

In his communication in *Nature* of August 31, p. 433, Mr. J. H. Pope implies that the name 'dawn chorus' was given to the phenomenon in the audio-frequency range to which he refers because of its occurrence at dawn. It was used many years ago by the late K. W. Tremellen, who to the best of our belief originated it. Certainly we know that in using it he had in mind the fact that the phenomenon sounds like the twittering of birds in their dawn chorus so characteristic of the English countryside.

When L. R. O. Storey was making his study of 'whistlers' at Cambridge, Mr. Tremellen lent him his file of papers on the subject and discussed the 'dawn chorus' with him. It is thus certain that Storey adopted the name from him and appreciated that the reference was to the similarity in sound of this 'whistler' phenomenon to the dawn chorus of the birds. In fact, in his paper¹ he says that the sound may be likened to that of a rookery heard from a distance.

Mr. Tremellen was well aware that the phenomenon was not confined to the dawn. Mr. Pope's suggestion that it should be called simply the 'chorus' obscures the origin and purpose of the name, and we plead that it should be retained with a reference, if necessary, to its true significance in relation to the characteristic sound of the phenomenon.

G. A. ISTD
G. MILLINGTON

Marconi's Research Laboratories,
Great Baddow,
Essex.

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