

Suter (1913) in his re-description of this species, remarks on the variability in riblet frequency, and in addition, recognised the subspecies *globosa* which has a "more elevated, broadly rounded conoidal spire, and narrower umbilicus" recording this from Wanganui, Dannevirke, Mauriceville, Paekakariki, and Wellington. The species *C. multicostrata* (Murdoch) and *C. pseudocoma* (Suter), the former from Wanganui, Ruatahuna, Motu River Valley, and the latter from Poverty Bay, Akaroa, Little River, Dyer's Pass, Riccarton Bush, may best be considered at most as subspecies or varieties in view of the variation shown for *C. coma* in the present paper.

More recently Whitten (1956) studied variation in the riblet index (ratio of total number of riblets on the body whorl to major diameter in mm) of *C. coma* in some ten localities ranging from Whangarei to Stewart Island. He was not able to illustrate any clear trends in variation and concluded that "in most localities there is considerable variation in the number of riblets amongst individuals from the one locality. The mean riblet index, however, does not show much variation between the various localities. A larger series of specimens from each locality could alter the mean index a little, but probably not very much."

The writer (1960) in statistical studies on representative species of six ribbed genera in New Zealand, was able to show that considerable advantages were to be obtained through the use of the second post-nuclear whorl. This whorl was shown to possess moderate relative stability and significant correlations with riblet frequencies in other post-nuclear whorls. The use of this whorl obviates the disadvantages presented by the frequently weathered first post-nuclear whorl and the indefinitely and closely ribbed aged whorls. It also allows the fuller use of samples in that younger specimens may be utilized. The speciation trends studied in the present account are based on statistical studies of riblet counts in the second post-nuclear whorl.

An examination of samples of *C. coma* taken in the Northern Tararua Range (approximately five miles south of the Manawatu Gorge) during September, 1958, showed that extremes in riblet frequency were very marked with two forms apparently predominating. During April, 1961, an area a little further to the south at Kahuterawa was visited and a sample of over 300 specimens taken. A study of these showed that a bimodality in riblet frequency clearly existed with the finely ribbed form predominating and grading into a less frequent but distinctly modal, wider-ribbed form. Samples from north of the Manawatu Gorge were then studied, and here it was found that only the widely ribbed form apparently existed. It was then decided to analyse all samples in the writer's collection. These have accumulated over the last 25 years and are fairly fully representative from Kaitaia in the far north to the northern districts of the South Island. The assemblage and study of more southern materials would have added to the value of the present paper, but it is doubtful whether these areas are as yet adequately sampled. The present materials studied, however, would appear to cover the more significant and interesting section of the species' range.

RESULTS

The materials studied were collected from more than 53 sampling stations and involve over 700 specimens. The Nelson sample (53) comprises material from five localities between the Whangamoia Range and Takaka Hill.

The information obtained from riblet counts of the second post-nuclear whorl is summarized in Text-figures 1 and 2. Text-figure 1 indicates the count range, the samples being placed in an approximately north to south sequence. The sampling localities, dates of collections, and numbers of specimens studied are given in the caption. A number of breaks along this north-south range of samples