

Two Fossil Cephalopods from North Canterbury.

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Plates 63, 64.

PROFESSOR R. SPEIGHT has been good enough to give me two fossil specimens, recently found in the Hurunui country, for identification and description. One of them was found in the Hurunui River bed near Ethelton, and its origin is unknown so far as exact site is concerned.

This specimen is an ammonite quite different from any species that has previously been found in New Zealand. A description of it is given below.

DALMASICERAS Djanélidzé, 1922.

A full description of this genus is given by its author (256-62, *Bull. G.S. de France*, ser. 4, vol. 21, 1923). The following is an abridged statement:—

Whorls in adult form very flattened, but innermost whorls wider than high. There are usually umbilical tubercles except in very young or very old forms. In some forms ribs may be fasciculated from umbilical tubercles. Usually there are primary ribs which originate on umbilical slope or on tubercles. About half-way along flank secondary ribs arise, two or three in number, between each pair of primary ribs. Suture-line is specially characterized by the short siphonal lobe, by a suspensive (umbilical) lobe formed from the summit of the second lateral saddle with its secondary lobe and the auxiliary lobes. First lateral lobe very large and unsymmetrical; of its two lateral branches the external is the larger. The lobes and saddles are long and straight. The summit of the principal saddles is symmetrically divided by a secondary lobe. The antisiphuncular lobe is straight, deep, and impaired. The genus is apparently restricted to the Upper Tithonian.

Dalmasiceras speighti n. sp. (Plate 63, figs. 2, 3; Plate 64, figs. 1, 2.)

The shell is of moderate size, but is too imperfect for exact measurement at a greater diameter than 51 mm. Its dimensions (in millimetres) are—

	A.			
Diameter ..	51	100	85	
Height ..	23	45	35	41
Width ..	13.5	26	17	20
Umbilicus ..	17	33	26	31

It is thus not very different in form from *D. kiliani* Djanélidzé, though distinctly wider and lower, a difference that might well be due to the larger size of the latter specimen. The involution is about one-half, whorls

much higher than wide, with the greatest width near the umbilicus. Wall of the umbilicus steep but very soon sloping off into the flank, which is gently inclined towards the sharply-curved periphery.

Ornamentation: Strong rounded primary ribs begin at bottom of umbilicus. They are first sharply curved backwards but afterwards cross flanks radially. Near periphery they bend forward and end with sharp forward curve near siphuncle. These ribs sometimes fork at about a third of their length from umbilicus. On border of periphery one or two secondary ribs are inserted between each pair of primary ribs. There are occasional constrictions on inner whorls.

The suture-line is almost identical with that of *Dal. dalmasi* (Djanélidzé, l.c., fig. 3, p. 267)—in particular, the short external lobe and the long and wide important first lateral lobe, which is not symmetrical. The other lobes also are very similar. The saddles are nearly equally divided by a secondary lobe, and show much the same state of division as those of *Dal. dalmasi*. The internal lobe, however, is rather different. The large anti-siphuncular saddle has not quite the same importance as in *Dal. dalmasi*, and the umbilical or suspensive lobe is not quite so deep.

It is interesting to record such an ammonite as this from New Zealand, as, judging from European equivalents, the horizon at which this species occurs is the Upper Tithonian. It is to be hoped that before long the locality from which the specimen came will be found, when it is possible that other members of the fauna of the period may also be collected.

NAUTILUS Linné.

The second specimen, Professor Speight tells me, was found at the Kaiwara Creek in a calcareous gritty greensand which here forms the base of the series of Cretaceous and Tertiary rocks; these, as usual, rest with a high unconformity on middle or older Mesozoic rocks. This specimen, though somewhat crushed, can be identified with certainty as a species of *Nautilus*.

Nautilus sp. aff. *suciensis* Whiteaves. (Plate 63, fig. 1.)

The specimen is 120 mm. in diameter and 80 mm. wide. Ventral surface is broadly rounded, and umbilicus appears to be completely covered. Surface ornamented with a series of large ribs continuous from umbilicus to periphery. At umbilicus ribs are nearly radial; they soon bend forwards, but at shoulder bend in a gentle curve strongly backwards and pass over periphery with backward loop. The condition of the specimen does not allow the position of the siphuncle to be seen.

These broadly-ribbed species of *Nautilus* do not appear to have existed after the Cretaceous period. The species *N. suciensis* Whiteaves, to which the present specimen is clearly closely allied, comes from Skidegate Inlet, in British Columbia, in rocks of Senonian age. No species of this group of *Nautilus* has previously been recorded from New Zealand.

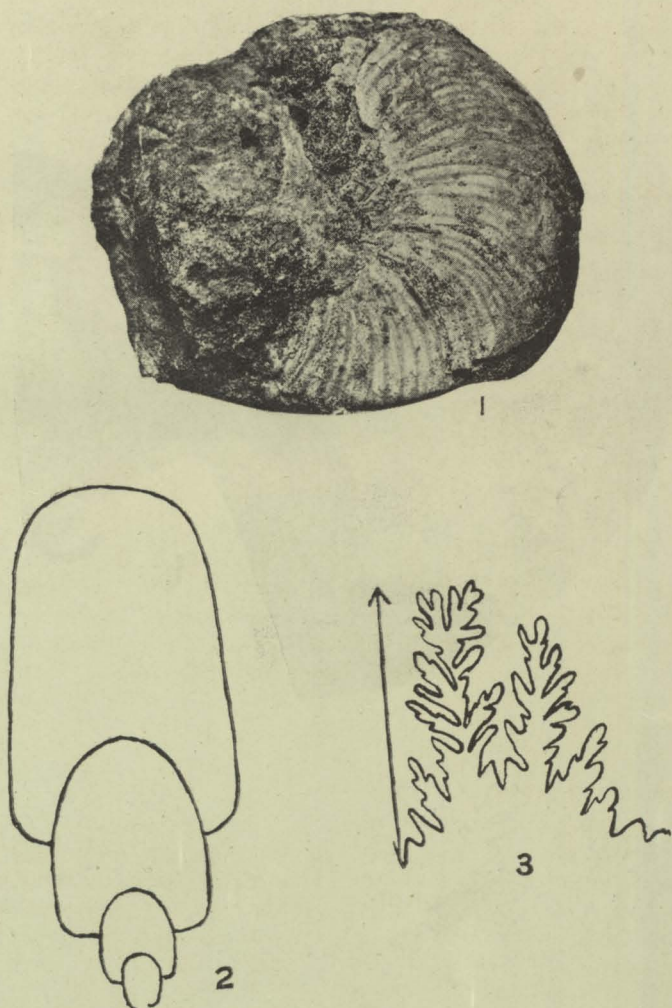


FIG. 1.—*Nautilus* aff. *suciensis* Whiteaves. $\times \frac{1}{2}$.
 FIG. 2.—*Dalmaniceras speighti*: Cross-section. $\times 2$.
 FIG. 3.—*Dalmaniceras speighti*: Internal suture-line. $\times 8$.

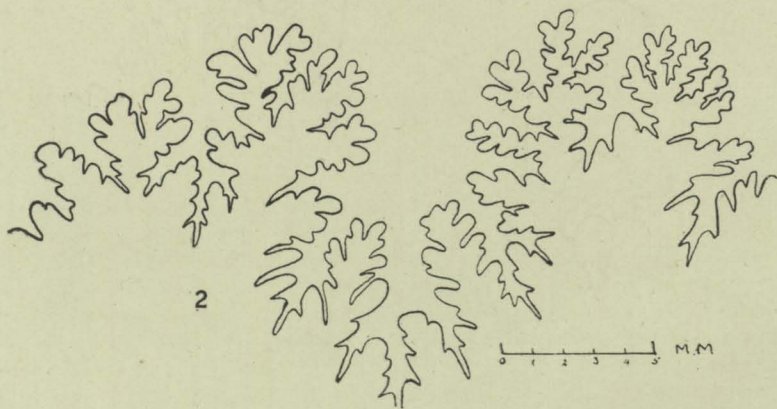


FIG. 1.—*Dalmasiceras speighti* n. sp. Natural size.
 FIG. 2.—*Dalmasiceras speighti* n. sp: Suture-line. At diameter, 71 mm.;
 height, 24 mm.; width, 15 mm.