

FILICINAE
POLYPODIACEAE
PHYTOECDYSONES FROM *PHYMATODES NOVAE-ZELANDIAE*

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The fern *Phymatodes novae-zelandiae* which is endemic to New Zealand has been shown to give extracts with pronounced insect moulting hormone activity in the house-fly ligature bioassay.¹ The activity of this plant is due to the presence of crustecdysone, polypodine B and α -ecdysone, which have now been isolated from frond tissue.

The alcoholic concentrate of dried, milled fronds (1 kg) was partitioned between light petroleum and 80% MeOH, water and the concentrated methanolic layer re-partitioned between CHCl_3 -MeOH- H_2O (1:1:1). The CHCl_3 fraction was eluted through a column of alumina (10% H_2O) with EtOAc-EtOH (1:1) to give an ecdysone rich fraction. Further chromatography on silica gel with CHCl_3 -EtOH (19:1) gave a series of fractions from which α -ecdysone (m.p. 237–239°, 100 mg), polypodine B (m.p. 253–255°, 180 mg) and crustecdysone (m.p. 239–241°, 70 mg) were crystallized. The identities of these compounds were established by a direct comparison with authentic samples (m.m.p., TLC, IR, UV, NMR and MS).

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¹ G. B. RUSSELL and P. FENEMORE, *N.Z. Jl. Sci.* **14**, 31 (1971).

Key Word Index—*Phymatodes novae-zelandiae*; Polypodiaceae; crustecdysone; polypodine B; α -ecdysone.

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ANGIOSPERMAE
DICOTYLEDONAE
ARALIACEAE
CONSTITUENTS OF THREE-LEAVED *ACANTHOPANAX*

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Plant. *Acanthopanax trifoliatum* (Linn.) Merr. *Occurrence.* Taipei, Taiwan (Formosa).
Uses. Folk medicinal, anti-paralysis. *Previous work.* On sister species: *Acanthopanax innovans*¹ and *A. sciadophylloides*.²

¹ M. YASUE *et al.*, *Yakugaku Zasshi* **87**, 247, 732 (1967); **88**, 390 (1968); **90**, 1113, 1172 (1970); *Chem. Pharm. Bull. Tokyo* **18**, 856 (1970).

² M. YASUE, Y. KATO, Y. M. LIN and J. SAKAKIBARA, *Yakugaku Zasshi* **88**, 738 (1968); **89**, 872 (1969); **90**, 341 (1970).