

## **Why is *Acalitus cottieri* (Lamb, 1952) (Acari: Eriophyidae) uncommon in the Auckland Region?**

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*Acalitus cottieri* (Lamb 1952) (Acari: Eriophyoidea: Eriophyidae: Eriophyinae) forms callous galls and witches brooms (stem proliferations) on *Coprosma* species. Manson (1984) records the mite from Dargaville to the Auckland Isles. On plants such as *C. robusta*, the galls are large and easy to spot (Fig. 1) and I have readily found galls containing *A. cottieri* in the central North Island and in the South Island. However, the species has rarely been found in the Auckland Region. It was found at Riverhead on *C. robusta* in October 1964 (Manson 1984), while I found it in suburban New Lynn, Waitakere City on *C. robusta* in August 2000, as well as by the roadside on the South Kaipara Peninsula infesting *C. robusta x propinqua* in December 2000, and at the margin of an estuary near the Kaipara Peninsula on *C. propinqua* in October 2003.



**Figure 1.** Callous or bud proliferation gall on *Coprosma robusta* caused by *Acalitus cottieri*.

Over the past five years, I have conducted extensive surveys through the Waitakere Ranges, a large block of indigenous ecosystems close to Auckland City, and found no *A. cottieri* galls on *Coprosma* spp., including many *C. robusta*. It can be concluded that the mite is very rare in this area.

At the time of the discovery of *A. cottieri* in New Lynn in 2000, I planted some *Coprosma robusta* and *C. lucida* seedlings in a suburban garden 160m from where these *A. cottieri* were found. The seedlings had been in pots for two years and had come from a forested residential area, Langholm, at the southern end of the Waitakere Ranges. The plants grew vigorously and were trimmed occasionally, during which time galls were not present. There were no signs of callous galls until February 2003, at which time the galls were abundant. A careful examination revealed some dead old galls, which suggests that they could have been present the previous winter.

The discovery of galls in New Lynn and on the South Kaipara Peninsula shows that *A. cottieri* is certainly present in the Auckland area. The mite is clearly capable of colonising new hosts many metres away, but the question remains as to why *A. cottieri* is so rare in the Auckland Region. It does not appear to be due to a lack of suitable host plants, as Manson (1984) lists seven host species of *Coprosma* (*cuneata*, *linariifolia*, *linariifolia* x *parviflora*, *parviflora*, *propinqua*, *pseudocuneata*, *robusta* and *tenuicaulis*) and I have found typical symptoms on three other species (*rhamnoides*, *robusta* x *propinqua* and *taylori*). Many of these species are abundant in the Auckland area. However, there is insufficient information about the habitat preferences of *A. cottieri*, or other factors that could influence its distribution.

## References

- Manson DCM. 1984. Eriophyinae (Arachnida: Acari: Eriophyoidea). *Fauna of New Zealand* 5:1-123.