

Specimens coming in from the field during the 24-hour insect bioblitz at Bushy Park Sanctuary, with Dr Robert Hoare far right.

Bioblitz moth controversy

The trapping and killing of a rarely seen species of moth recently caused a flurry of upset comments on Facebook. **Mike Dickison** sets some facts straight.

In February, scientists from all over New Zealand took part in a bioblitz – a 24-hour species count – of Bushy Park, a Forest & Bird reserve near Whanganui. Landcare Research entomologist Robert Hoare was busy identifying insects when he made a startling discovery. A colleague checked the contents of a Malaise trap (a muslin tent that channels insects to an alcohol-filled collecting bottle) and passed him a couple of moths it had caught. Robert knew this group of moths, the lichen tuft moths, very well. He had even written a key to the group for Landcare. He was amazed to see the moths were *Izatha caustopa*, an endemic species that had only been seen once since 1985.

It's important to note that *I. caustopa* may or may not actually be rare. Robert is one of the very few lepidopterists (butterfly and moth specialists) working in New Zealand and one of the only people in the world who would recognise the moth at first sight. Most moths are collected at night, in light traps, but *I. caustopa* doesn't seem to be attracted to light. It had last been documented in Ohakune in 1921, in Wellington in 1942 and near Napier in 1964 and 1985. Its larvae burrow into dead branches of tree fuchsia, so its scarcity might reflect its host plant's decline (tree fuchsia is very palatable to possums) but more likely reflects the shortage of entomologists out looking for small brown moths.

When the news was posted on Facebook, there was a flurry of upset comments: had we killed the last two? Why did we have to kill insects? Why not just take a photo? It's not widely understood why entomologists collect and pin insects or preserve them in alcohol. Photos are no use: some species can be told apart only by counting the number of hairs under the abdomen or by dissecting the male genitals. These days, entomology relies on examining

DNA, something you can't get from a photograph. Entomologists try to minimise unnecessary killing, but sometimes there's no other way to survey hundreds of species in a single weekend.

As for wiping out the species, the fact that two moths were trapped in just the first night means they're unlikely to be rare at Bushy Park – there must be thousands living there, unnoticed by anyone. The entomologists that can recognise them are an endangered species themselves. That Bushy Park is a stronghold for *Izatha caustopa* is great news and shows the value of intensive surveys of remnant forests. How many other species have quietly gone extinct, undetected, while nobody was looking?

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Izatha caustopa by George Vernon Hudson from *The Butterflies and Moths of New Zealand* (1928).