



## Intercontinental fieldwork with a near zero carbon footprint: hornworts in Jamaica

This year sees the 80th anniversary of the Natural History Society of Jamaica. To celebrate, the Society decided to hold a series of field excursions focussing on poorly recorded groups. Concerning plants, hornworts came top of the pile with only six species recorded; far fewer than from other Caribbean islands and Latin American countries.

However, there was a problem: no one in the Society had ever seen a hornwort. Liz Andrew in Jamaica and Jeff Duckett back in England, who had collected hornworts on six continents, came up with a novel solution. Drawing on his experience of hornworts on Tobago and Columbia, Jeff presented a webinar about hornwort biology, where to find them and how to identify them.

Then came the excursions. From the outset, hornworts were found in numerous places. Jeff was then sent WhatsApp images which were identified immediately. 'It has yellow spores and is monocious so it's *Phaeoceros carolinianus*. The black spores make this *Anthoceros*. Prostrate sporophytes are diagnostic of *Notothylas* and

△ *Fossombronia porphyroleuca* (left). *Nothoceros vincentianus* (centre). *Notothylas* cf. *orbicularis* (right).

All photographs by Liz Andrew

that's a *Fossombronia* growing with it. Since the rhizoids are colourless it must be *F. porphyroleuca*, a common neotropical species only recently found on Jamaica.' Society members have now seen *Anthoceros punctatus*, plus a further *Anthoceros* species new to the island and now awaiting identification, *Nothoceros vincentianus*, *Notothylas breutelli*, *N. orbicularis*, also new to the island, and *Phaeoceros carolinianus*. *Leiosporoceros dusii* and *Dendroceros crispus* remain elusive but we know exactly where to look.

Apart from the petrol used to get the participants to the local venues these studies must qualify as the most carbon neutral intercontinental field work ever. Unfortunately, this may not last: Jeff now feels a pressing urge to visit Jamaica and collect hornworts, not to mention *Fossombronia*, to add to the world coverage of their fungal endophytes.

Many thanks for their enthusiasm and hard work to Lori-Ann Harris (President), Ann Sutton, and members of the Natural History Society of Jamaica who made the field excursions a great success.

**Jeff Duckett** and **Liz Andrew**

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