

***Psychotria greenwelliae* Fosberg – not on O‘ahu!**¹

MICHAEL KIEHN² (Dept. of Biogeography, University of Vienna, Rennweg 14, 1030 Vienna, Austria; email: Michael.kiehn@univie.ac.at) & CLYDE T. IMADA (Hawaii Biological Survey, Bishop Museum, 1525 Bernice St, Honolulu, Hawai‘i 96817-2704, USA)

In 1996, *Psychotria greenwelliae* Fosberg, hitherto known only from Kaua‘i, was recorded from both the Wai‘anae and Ko‘olau Ranges on O‘ahu (Herbarium Pacificum Staff 1996: 6–7). The reports were based on collections made by the first author of this paper in 1990 (Kiehn *et al.* MK-900722-4/1, Ko‘olau Range, Mānoa Cliff Trail, east-exposed slope, 488 m, 22 Jul 1990; Kiehn *et al.* 900923-1/2 and Kiehn *et al.* 900923-1/5, Wai‘anae Range, Wai‘anae Kai Trail, steep south-exposed slope on way to ridge, 610–732 m, 23 Sep 1990), which were identified by Seymour H. Sohmer as *Psychotria greenwelliae* based on vouchers deposited at the Bishop Museum’s *Herbarium Pacificum* (BISH).

After becoming aware of this publication, the first author expressed his doubts about these identifications in personal communications with Warren L. Wagner, Curator of Pacific Botany at the Smithsonian Institution. Consequently, the report of *Psychotria greenwelliae* for O‘ahu was referred to as “not *P. greenwelliae*” in the revised edition of the *Manual of the Flowering Plants of Hawai‘i* (Wagner *et al.* 1999: 1892).

In order to clarify the situation, Christopher F. Puttock (formerly of BISH) and the authors of this paper attempted to re-identify the vouchers in question (as suggested by Wagner *et al.* 1999: 1892). We also critically examined the available *Psychotria* material collected in the Ko‘olau and Wai‘anae Ranges of O‘ahu and deposited at BISH and the National Tropical Botanical Garden herbarium (PTBG), and revisited the collecting sites of the vouchers identified by S.H. Sohmer as *Psychotria greenwelliae*, making additional collections of all *Psychotria* species in the corresponding regions. The results of these studies are reported here.

***Psychotria* from the Ko‘olau and Wai‘anae Ranges**

The following *Psychotria* taxa are represented by collections at BISH and PTBG:

Ko‘olau Range: *Psychotria fauriei* (H. Lév.) Fosberg; *P. hexandra* H. Mann subsp. *oahuensis* Degener & Fosberg (3 varieties); *P. kaduana* (Cham. & Schltld.) Fosberg; *P. mariniana* (Cham. & Schltld.) Fosberg

Wai‘anae Range *Psychotria hathewayi* Fosberg var. *brevipetiolata* Fosberg; *P. hathewayi* Fosberg var. *hathewayi*; *P. kaduana* (Cham. & Schltld.) Fosberg; *P. mariniana* (Cham. & Schltld.) Fosberg

This list is in accordance with the *Psychotria* species reported for O‘ahu by Wagner *et al.* (1999), with the exception of *P. greenwelliae*.

Re-identification of the vouchers reported to represent *Psychotria greenwelliae*

Re-examination of the vouchers identified by Sohmer as *P. greenwelliae* turned out to be problematic as none of them could be traced or relocated at BISH, despite search efforts by the authors and BISH staff both in 1998 and 2009. However, based on fixations of flowering and fruiting material and on photos of the collections in question taken by the first author, the following identifications could be made: Kiehn *et al.* MK-900722-4/1

1. Contribution No. 2010-004 to the Hawaii Biological Survey.

2. Research Associate, Department of Natural Sciences, Bishop Museum, 1525 Bernice Street, Honolulu, Hawai‘i 96817-2704, USA.

from the Ko'olau Range doubtlessly is *P. mariniana*. The collections Kiehn *et al.* 900923-1/2 and Kiehn *et al.* 900923-1/5 from the Wai'anae Range represent the species *P. hathewayi*. However, based on the material available to the authors, it was not possible to key out the collections to variety.

Re-collecting of *Psychotria* in the original collecting areas in the Ko'olau and Wai'anae Ranges

Additional field work in both mountain ranges was carried out in 1998 and 1999. The following *Psychotria* taxa were documented:

Ko'olau Range: Mānoa Cliff Trail (all collected 23 Aug 1998)

Psychotria kaduana: Kiehn *et al.* MK 980823-4/1 (BISH); Kiehn *et al.* 980823-4/2 (BISH).

Psychotria mariniana: Kiehn *et al.* MK 980823-3/1 (BISH); Kiehn *et al.* MK 980823-3/2 (BISH).

Wai'anae Range:

Psychotria hathewayi var. *brevipetiolata*: Imada *et al.* MK 990906-1/2, Wai'anae Kai Trail, loop trail (right side when seen from below), ca 750 m, 6 Sep 1999 (BISH).

Psychotria hathewayi var. *hathewayi*: Takahama *et al.* MK 990901-4/9, Pāhole Forest Reserve, Mokulē'ia Trail, ca 610 m (2000 ft), 1 Sep 1999 (BISH); Takahama *et al.* MK 990901-4/11, same as above (PTBG); Imada *et al.* MK 990906-1/3, Wai'anae Kai Trail, loop trail (right side when seen from below), ca 750 m, 6 Sep 1999 (BISH); Imada *et al.* MK 990906-2/2, Wai'anae Kai Trail, ridge at powerline towers, ca 800 m, 6 Sep 1999 (BISH; PTBG); Imada *et al.* MK 990906-3/7, Wai'anae Kai Trail, ridge between powerline towers and pinnacle rock, ca 800 m, 6 Sep 1999 (BISH).

Psychotria mariniana: Takahama *et al.* MK 990901-6/3, Pāhole Forest Reserve, Mokulē'ia Trail, dry area after second major gulch, ca 610 m (2000 ft), 1 Sep 1999 (PTBG); Imada *et al.* MK 990906-3/1, Wai'anae Kai Trail, ridge between powerline towers and pinnacle rock, ca 800 m, 6 Sep 1999 (BISH, PTBG); Imada *et al.* MK 990906-3/3, same locality and date (BISH).

These recorded species all are in accord with earlier collections from these regions represented in the BISH and PTBG herbaria.

Conclusion

From the viewpoint of the authors of this paper, these findings clearly indicate that *Psychotria greenwelliae* Fosberg is **not** present on O'ahu.

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