



DNA Analysis of Hawaii CRB

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DNA from four CRB adults collected in Hawaii were compared to DNA samples from other CRB populations in the Pacific using RFLP analysis. The Guam and Hawaii populations have DNA which breaks into 253 bp fragments. DNA fragments of this size are absent in DNA samples from Diego Garcia, Fiji, Samoa, and PNG. Thus the Hawaii population may have originated from Guam or a currently unknown common source.

1 Notes

DNA was harvested from hind femurs of CRB adults from Hawaii, Diego Garcia, and Guam and processed to find **restriction fragment length polymorphism** (RFLP). Collection data for the four Hawaii specimens are provided in a previous **technical report**. The RFLP results from the Hawaii samples match those from Guam. The results from Diego Garcia matched those from Fiji, Samoa, and Papua New Guinea.

See attachment 3 for an image of the RFLP gels.

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C:/Documents and Settings/Administrator/My Documents/CRB Tech Reports/2014-01-17A Hawaii Beetle Dissections/CRB2014-01-17A.lyx

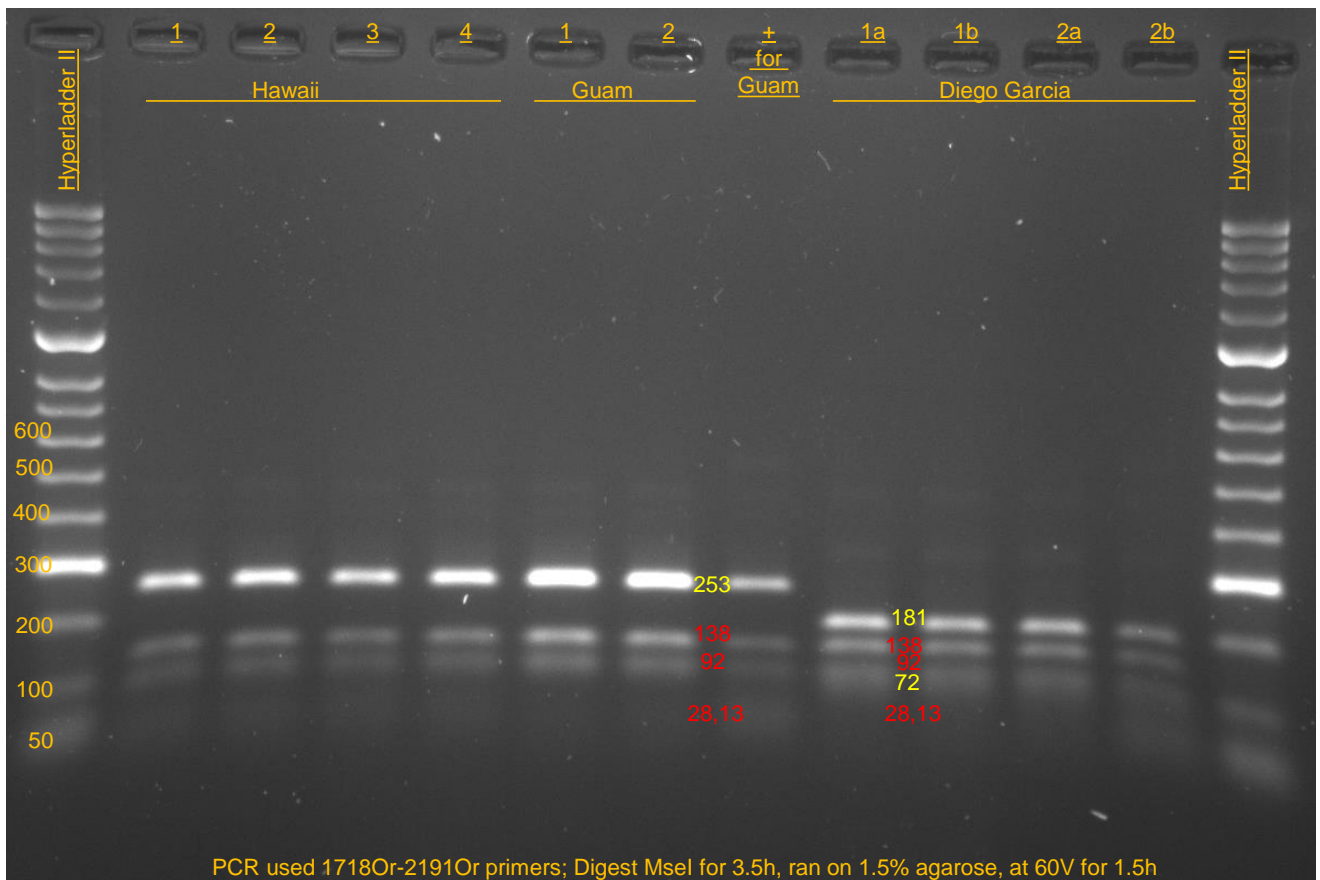
2 Acknowledgments

Thanks to Dan Vice USDA-APHIS Wildlife Services for collecting CRB adults on Diego Garcia on a recent trip. Thanks to USDA-APHIS-PPQ for releasing the Hawaii CRB specimens to us.

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3 Attachment

RFLP of *Oryctes rhinoceros* COI (1718-2191 amplicon)
-2014/02/112 (gel 634.tif)
-cut with MseI to distinguish Guam CRB populations
from other CRB populations (253bp band)



RFLP of Oryctes COI (1718-2191 amplicon)
 -2012/09/18 gel 154.tif
 -cut with MseI to distinguish
 Guam from 'Fiji/common' populations

