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Part III

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Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Revised Proposed Designation of Critical Habitat for 12 Species of Picture-Wing Flies From the Hawaiian Islands; Proposed Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AU93

Endangered and Threatened Wildlife and Plants; Revised Proposed Designation of Critical Habitat for 12 Species of Picture-Wing Flies From the Hawaiian Islands

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), revise our August 15, 2006, proposal to designate critical habitat for 12 species of Hawaiian picture-wing flies (*Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera*, and *D. tarphytrichia*) under the Endangered Species Act of 1973, as amended (Act). In total, approximately 9,238 acres (ac) (3,738 hectares (ha)) fall within the boundaries of this revised proposed critical habitat designation. The revised proposed critical habitat is located in four counties (City and County of Honolulu, Hawaii, Maui, and Kauai) in Hawaii.

DATES: We will accept comments from all interested parties until January 28, 2008. We must receive requests for public hearings, in writing, at the address shown in the **ADDRESSES** section by January 14, 2008.

ADDRESSES: If you wish to comment on this revised proposed rule, you may submit your comments and materials by any one of several methods:

1. By mail or hand-delivery to: Patrick Leonard, Field Supervisor, Pacific Islands Fish and Wildlife Office, U.S. Fish and Wildlife Service, 300 Ala Moana Boulevard, Room 3–122, P.O. Box 50088, Honolulu, HI 96850.
2. By electronic mail (e-mail) to: *fw1pie_pwfch@fws.gov*. Please see the Public Comments Solicited section below for other information about electronic filing.
3. By fax to: the attention of Patrick Leonard at 808–792–9581.
4. Via the Federal eRulemaking Portal at: *http://www.regulations.gov*. Follow the instructions for submitting comments.

FOR FURTHER INFORMATION CONTACT: Patrick Leonard, Field Supervisor, Pacific Islands Fish and Wildlife Office, 300 Ala Moana Boulevard, Room 3–122, P.O. Box 50088, Honolulu, HI 96850; telephone 808–792–9400; facsimile 808–792–9581. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Public Comments Solicited

We intend that any final action resulting from this revised proposal will be as accurate and as effective as possible. Therefore, we request comments or suggestions on this revised proposed rule. We particularly seek comments concerning:

(1) The reasons why we should or should not designate habitat as ''critical habitat'' under section 4 of the Act, including whether the benefit of designation would outweigh threats to the species caused by the designation, such that the designation of critical habitat is prudent;

(2) Specific information on:

- The amount and distribution of *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera*, and *D. tarphytrichia* habitat,
- What areas occupied at the time of listing and that contain the features essential for the conservation of the species we should include in the designation and why, and
- What areas not occupied at the time of listing are essential to the conservation of the species and why;

(3) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed critical habitat;

(4) Any foreseeable economic, national security, or other potential impacts resulting from the proposed designation and, in particular, any impacts on small entities, and the benefits of including or excluding areas that exhibit these impacts;

(5) Whether we could improve or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments; and

(6) Our proposed exclusion of 78 acres (ac) (31 hectares (ha)) of lands currently managed under the U.S. Army's Oahu Integrated Natural Resources Management Plan (INRMP), and whether this INRMP provides a benefit to the species and should therefore exempt these lands from designation.

You may submit your comments and materials concerning this revised proposal by any one of several methods (see **ADDRESSES**). If you use e-mail to submit your comments, please include ''Attn: Hawaii picture-wing flies critical habitat'' in your e-mail subject header, preferably with your name and return address in the body of your message. If you do not receive a confirmation from the system that we have received your e-mail, contact us directly by calling our Pacific Islands Fish and Wildlife Office at 808–792–9400. Please note that we must receive comments by the date specified in the **DATES** section in order to consider them in our final determination and that we will close out the e-mail address *fw1pie_pwfch@fws.gov* at the termination of the public comment period.

Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing this revised proposed rule, will be available for public inspection, by appointment, during normal business hours at the Pacific Islands Fish and Wildlife Office, 300 Ala Moana Boulevard, Room 3–122, P.O. Box 50088, Honolulu, HI 96850, (telephone 808–792–9400).

Background

It is our intent to discuss only those topics directly relevant to the designation of critical habitat in this revised proposed rule. For additional information on the 12 species of Hawaiian picture-wing flies for which we are proposing to designate critical habitat, refer to the final listing rule for the 12 species of picture-wing flies published in the **Federal Register** on May 9, 2006 (71 FR 26835).

This revised proposal replaces our original proposal to designate critical habitat for the 12 species of picture-wing flies published on August 15, 2006 (71 FR 46994). In that rule, we proposed to designate approximately 18 acres (ac) (7.3 hectares (ha)) as critical habitat for 11 of the 12 species of Hawaiian picture-wing flies. In that same proposal we indicated our intent to exclude several areas from the critical habitat designation under section 4(b)(2) of the Act and not to include specific areas that we believed did not meet the definition of critical habitat under

section 3(5)(A) of the Act. We did not propose critical habitat for *Drosophila neoclavisetae*, a species endemic to Maui, because we did not believe that Maui Pineapple Company's Puu Kukui Watershed Management Area met the definition of critical habitat under section 3(5)(A) of the Act, based on ongoing conservation efforts. These were the only areas identified to be essential for the conservation of *D. neoclavisetae*. Under this revised proposed rule, we are proposing to designate critical habitat for *D. neoclavisetae*. Under this revised proposed rule, we are proposing to designate approximately 9,238 ac (3,738 ha) as critical habitat for 12 species of Hawaiian picture-wing flies. Of these lands, we are exempting 78 ac (31 ha) of land from this proposed critical habitat revision under section 4(a)(3)(B)(i) of the Act that are covered by the U.S. Army Garrison Hawaii Oahu Training Areas Natural Resource Management (Final Report, August 2000) and the Oahu Integrated Natural Resource Management Plan 2002–2006 (Army 2000).

We are revising our original proposal because we received comments from peer reviewers in response to the original proposed rule questioning the methodology and lack of scientific basis. The current revised proposal is based on the best scientific data available, including defining suitable habitat based on distribution and density of host plants. The methods section of this notice presents the specific details and approach used to identify the revised proposed critical habitat unit boundaries.

Previous Federal Actions

For more information on previous Federal actions concerning the 12 species of Hawaiian picture-wing flies, refer to the final listing rule published in the **Federal Register** on May 9, 2006 (71 FR 26835), and the original proposed designation of critical habitat published in the **Federal Register** on August 15, 2006 (71 FR 46994).

Under the terms of a settlement agreement approved by the U.S. District Court for the District of Hawaii on August 31, 2005 (*CBD* v. *Allen*, CV–05–274–HA), we were to (1) make a final listing decision for the 12 picture-wing flies by May 6, 2006; (2) propose to designate critical habitat by September 15, 2006; and (3) finalize a critical habitat rule by April 17, 2007. Our determination that the designation of critical habitat for the 12 species of Hawaiian picture-wing flies was prudent was included in the final listing rule, published in the **Federal Register** on May 9, 2006 (71 FR 26849).

On August 15, 2006, we published a proposal to designate 18 ac (7.3 ha) of critical habitat for 11 picture-wing fly species on the islands of Hawaii, Kauai, Molokai, and Oahu (71 FR 46994). Publication of this proposed rule opened a 60-day public comment period, which closed on October 16, 2006. On January 4, 2007, we published a notice announcing the availability of the draft economic analysis for the designation of critical habitat for 11 species of picture-wing flies and reopening the public comment period on the proposal until January 19, 2007 (72 FR 321).

We received comments from peer reviewers expressing concern with the biological adequacy of the proposed 18-acre (7.3-ha) designation, and the need to consider host plant density and distribution information in determining critical habitat boundaries. In addition, one of the peer reviewers presented new observation data for one of the species addressed in the proposed rule. On April 16, 2007, we submitted a joint stipulation with the Center for Biological Diversity (CBD) to the U.S. District Court to modify the timetable of the August 31, 2005, settlement agreement for the proposed and final critical habitat rules for the 12 Hawaiian picture-wing flies, citing the need to address comments received during the public comment periods and to conduct additional review of the proposal. A joint stipulation was approved by the Court on April 18, 2007, to allow additional time to reconsider the proposed rule in light of the comments received, and to provide an opportunity for additional public comment. Under the terms of the extension, we are required to submit a proposed critical habitat rule to the **Federal Register** by November 15, 2007, and a final critical habitat rule by November 15, 2008.

Critical Habitat

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features:

(a) essential to the conservation of the species and

(b) that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided under the Act are no longer necessary.

Critical habitat receives protection under section 7 of the Act through the prohibition against Federal agencies carrying out, funding, or authorizing the destruction or adverse modification of critical habitat. Section 7 of the Act requires consultation on Federal actions that may affect critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by the landowner.

For inclusion in a critical habitat designation, habitat within the geographical area occupied by the species at the time it was listed must first contain features that are essential to the conservation of the species. Critical habitat designations identify, to the extent known using the best scientific data available, habitat areas that provide essential life cycle needs of the species (areas on which are found the primary constituent elements, as defined at 50 CFR 424.12(b)).

Occupied habitat that contains the features essential to the conservation of the species meets the definition of critical habitat only if those features may require special management considerations or protection.

Under the Act, we can designate unoccupied areas as critical habitat only when we determine that the best available scientific data demonstrate that the designation of that area is essential to the conservation needs of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994, (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines, provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and

with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be proposed as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, or other unpublished materials and expert opinion or personal knowledge.

Habitat is often dynamic, and species may move from one area to another over time. Furthermore, we recognize that designation of critical habitat may not include all of the habitat areas that may eventually be determined to be necessary for the recovery of the species, as additional scientific information may become available in the future. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be required for recovery of the species.

Areas that support populations, but are outside the critical habitat designation, will continue to be subject to conservation actions we implement under section 7(a)(1) of the Act. They are also subject to the regulatory protections afforded by the section 7(a)(2) jeopardy standard, as determined on the basis of the best available scientific information at the time of the agency action. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, habitat conservation plans (HCPs), or other species conservation planning efforts to the extent any new information available to these planning efforts calls for a different outcome.

Methods

As required by section 4(b) of the Act, we used the best scientific data available in determining areas occupied at the time of listing that contain the features essential to the conservation of *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera,* and *D. tarphytrichia,* and areas unoccupied at the time of listing that are essential to their conservation. Based on the best available information, the units being proposed in this revised proposed rule as critical habitat represent the only geographical areas known to us that provide these essential conservation features. As a result, we are not proposing critical habitat in any areas outside the geographical areas presently occupied by each of the 12 species.

We have also reviewed the available information that pertains to the habitat requirements for these species. The following geospatial, tabular data sets were used in preparing this revised proposed critical habitat: Occurrence data for all 12 species (K. Kaneshiro, in litt. 2005a, pp. 1–16); vegetation mapping data for the Hawaiian Islands (Gap Analysis Program (GAP) Data—Hawaiian Islands 2005); color mosaic 1:19,000 scale digital aerial photographs for the Hawaiian Islands dated April to May 2005; and 1:24,000 scale digital raster graphics of U.S. Geological Survey (USGS) topographic quadrangles. Land ownership was determined from geospatial data sets associated with parcel data from Oahu County (2006); Hawaii County (2005); Kauai County (2005); and Maui County (2004).

We reviewed a variety of peer-reviewed and other articles for this revised proposal, which included background information on the biology of each of the 12 species, (e.g., Montgomery 1975, pp. 83, 94, 96–98, and 100; Foote and Carson 1995, pp. 1–4; Kaneshiro and Kaneshiro 1995, pp. 1–47); plant ecology and biology (Wagner et al. 1999, pp. 45, 52–53, 971, 1,314–1,315, and 1,351–1,352); and the ecology of the Hawaiian Islands and the areas being considered in this revised proposal (e.g., Smith 1985, pp. 227–233; Stone 1985, pp. 251–253, 256, and 260–263; Cuddihy and Stone 1990, pp. 59–66, 73–76, and 88–94). Additional information reviewed included the October 29, 1991, final rule listing the plant species *Urera kaalae* (a host plant for two of the fly species) as endangered (56 FR 55770); the May 9, 2006, final listing rule for the 12 species of picture-wing flies (71 FR 26835); the August 15, 2006, proposed critical habitat designation for 11 species of picture-wing flies (71 FR 46994); unpublished reports by TNCH; and aerial photographs and satellite imagery of the Hawaiian Islands.

We obtained additional information through personal communications with landowners, scientists, and land managers familiar with the 12 species and their habitats, including individuals affiliated with the University of Hawaii, University of California at Berkeley, the U.S. Geological Survey, the Bishop Museum, Hawaii State Department of Land and Natural Resources, TNCH, and the U.S Army. Specific information from these sources included estimates of historic and current distribution, abundance, and territory sizes for the 12 species, as well as data on resources and habitat requirements.

As described in the final listing rule (May 9, 2006, 71 FR 26835), each species of Hawaiian picture-wing fly addressed in this revised proposal is found only on a single island, and the larvae of each species is dependant upon only a single or a few related species of plants (host plant(s)) (summarized in Table 1).

TABLE 1.—DISTRIBUTION OF 12 HAWAIIAN PICTURE-WING FLIES BY ISLAND, GENERAL HABITAT TYPE, AND PRIMARY HOST PLANT(S)

Species	Island	Elevation range	General habitat type	Primary host plants
Oahu Species				
Drosophila aglaia	Oahu	1,400–2,900 feet (ft) (425–885 meters (m)).	Mesic forest	*Urera glabra.*
D. hemipeza	Oahu	1,500–2,900 ft (460–885 m).	Mesic forest	*Cyanea* sp., *Lobelia* sp., *Urera kaalae* (E).
D. montgomeryi	Oahu	1,900–2,900 ft (580–885 m).	Mesic forest	*Urera kaalae* (E).
D. obatai	Oahu	1,500–2,500 ft (460–760 m).	Dry to mesic forest	*Pleomele forbesii.*

TABLE 1.—DISTRIBUTION OF 12 HAWAIIAN PICTURE-WING FLIES BY ISLAND, GENERAL HABITAT TYPE, AND PRIMARY HOST PLANT(S)—Continued

Species	Island	Elevation range	General habitat type	Primary host plants
D. substenoptera	Oahu	1,300–4,000 ft (395–1,220 m).	Wet forest	*Cheirodendron platyphyllum, C. trigynum, Tetraplasandra kavaiensis, T. oahuensis.*
D. tarphytrichia	Oahu	1,900–2,900 ft (580–885 m).	Mesic forest	*Charpentiera obovata.*
Hawaii (Big Island) Species				
D. heteroneura	Big Island	3,000–6,000 ft (915–1,830 m).	Mesic to wet forest	*Cheirodendron trigynum*, *Clermontia* sp., *Delissea parviflora.*
D. mulli	Big Island	2,150–3,250 ft (655–990 m).	Wet forest	*Pritchardia beccariana.*
D. ochrobasis	Big Island	3,400–5,400 ft (1,035–1,645 m).	Mesic to wet forest	*Clermontia* sp., *Marattia douglasii*, *Myrsine* sp.
Molokai Species				
D. differens	Molokai	3,650–4,500 ft (1,115–1,370 m).	Wet forest	*Clermontia* sp.
Kauai Species				
D. musaphilia	Kauai	2,600–3,700 ft (790–1,130 m).	Mesic forest	*Acacia koa.*
Maui Species				
D. neoclavisetae	Maui	3,400–4,600 ft (1,040–1,400 m).	Wet forest	*Cyanea kunthiana, C. macrostegia* ssp., *macrostegia.*

Oahu Species

Drosophila aglaia

Drosophila aglaia is historically known from five localities within the Waianae Mountains of Oahu between 1,400–2,900 feet (ft) (425–885 meters (m)) above sea level. *Drosophila aglaia* is restricted to the natural distribution of its larval stage host plant, *Urera glabra* (family Urticaceae), which is a small shrub-like endemic tree found within dry to mesic, lowland, *Diospyros* sp., ohia and koa forest. The larvae of *D. aglaia* feed within the decomposing bark and stem of *U. glabra*. This plant does not form large stands, and is infrequently scattered throughout slopes and gulches within mesic forest habitat in the Waianae Mountains on Oahu.

Drosophila hemipeza

Drosophila hemipeza is restricted to the island of Oahu where it is historically known from seven localities between 1,500–2,900 ft (460–885 m) above sea level (not including the Pupukea site, which is considered an extirpated population). Montgomery (1975, p. 96) determined that *D. hemipeza* larvae feed within the decomposing portions of several different mesic forest plants, including the decomposing stems of *Lobelia* sp. (family Campanulaceae), and the decomposing bark and stems of *Cyanea* sp. (family Campanulaceae), on steep ridges and gulches within dry to mesic, lowland, ohia and koa forest (Kaneshiro and Kaneshiro 1995, p. 17; Science Panel 2005, p. 16). The larvae also feed within the decomposing bark of *Urera kaalae* (family Urticaceae), a federally endangered plant (Service 1995, pp. 81–83; October 29, 1991, 56 FR 55770) that grows on slopes and in gulches of diverse mesic forest (Wagner et al. 1999, pp. 1,314–1,315). In 2004, only 41 individuals of *U. kaalae* were known to remain in the wild (USFWS 2004, p. 9). In 2005, TNCH outplanted many seedlings of this species at several locations within *D. hemipeza*'s historic range (TNCH 2005, p. 6).

Drosophila montgomeryi

Drosophila montgomeryi is historically known from three localities within the Waianae Mountains on western Oahu between 1,900–2,900 ft (580–885 m) above sea level. Montgomery (1975, p. 97) reported that the larvae of this species feed within the decaying bark of *Urera kaalae,* a federally endangered plant (USFWS 1995, pp. 81–83; October 29, 1991, 56 FR 55770) that grows on slopes and in gulches within mesic, lowland, diverse ohia and koa forest (Wagner et al. 1999, pp. 1,314–1,315). As stated earlier, in 2004, only 41 individuals of *U. kaalae* were known to remain in the wild (USFWS 2004, p. 9). In 2005, TNCH outplanted many seedlings of this species at several locations within *D. montgomeryi*'s historic range (TNCH 2005, p. 6).

Drosophila obatai

Drosophila obatai is historically known from two localities between 1,500–2,500 ft (460–760 m) above sea level on the island of Oahu. *Drosophila obatai* larvae feed within decomposing portions of *Pleomele forbesii* (family Agavaceae), a candidate for Federal listing (May 11, 2005, 70 FR 24883) (Kaneshiro and Kaneshiro 1995, p. 27; Montgomery 1975, p. 98). These host plants grow on slopes within dry to mesic, lowland, ohia and koa forest, and occur singly or in small clusters, rarely forming large stands (Wagner et al. 1999, pp. 1,351–1,352).

Drosophila substenoptera

Drosophila substenoptera is historically known from seven localities in both the Koolau and Waianae Mountains on the island of Oahu at elevations between 1,300–4,000 ft (395–1,220 m) above sea level. Montgomery (1975, p. 100) determined that *D. substenoptera* larvae feed within the decomposing bark of *Cheirodendron platyphllum* and C. *trigynum* trees (family Araliaceae), and *Tetraplasandra kavaiensis* and *T. oahuensis* trees

(family Araliaceae) in localized patches within mesic to wet, lowland to montane, ohia and koa forest.

Drosophila tarphytrichia

Drosophila tarphytrichia was historically known from both the Koolau and the Waianae Mountains between 1,900–2,900 ft (580- to 885 m) above sea level on the island of Oahu. *Drosophila tarphytrichia* is now apparently extirpated from the Koolau range, where it was originally discovered near Manoa Falls, and is presently known from four localities in the Waianae Mountains (Kaneshiro and Kaneshiro 1995; Hawaii Biodiversity and Mapping Program (HBMP), in litt. 2005; K. Kaneshiro, in litt. 2005a). The larvae of *D. tarphytrichia* feed on the decomposing portions of the stems and branches of *Charpentiera obovata* trees (family Amaranthaceae) within dry to mesic, lowland, ohia and koa forest (Montgomery 1975, p. 100).

Hawaii (Big Island) Species

Drosophila heteroneura

Drosophila heteroneura has been the most intensely studied of the 12 species discussed in this revised proposed rule (Kaneshiro and Kaneshiro 1995, p. 19). This species is restricted to the island of Hawaii, where historically it was known to be widely distributed between 3,000–6,000 ft (915–1,830 m) above sea level. *Drosophila heteroneura* has been recorded from 24 localities on 4 of the island's 5 volcanoes (Hualalai, Mauna Kea, Mauna Loa, and Kilauea) within mesic to wet, montane, ohia and koa forest (K. Kaneshiro, in litt. 2005a, pp. 4–8). *D. heteroneura* larvae primarily feed within the decomposing bark and stems of *Clermontia* sp. (family Campanulaceae), including *C. clermontioides,* and *Delissea parviflora* (family Campanulaceae), but it is also known to feed within decomposing portions of *Cheirodendron trigynum* (family Araliaceae) (Kaneshiro and Kaneshiro 1995, p. 19).

Drosophila mulli

Drosophila mulli is restricted to the island of Hawaii and is historically known from three localities between 2,150–3,250 ft (655–990 m) above sea level. Only adult flies of these species have ever been observed, and only on the leaf undersides of the endemic fan palm, *Pritchardia beccariana* (family Arecaceae), occurring within wet, montane, ohia forest. This is the only known association of a *Drosophila* species with a native Hawaiian palm species. The exact larval feeding site on this host plant remains unknown because attempts to rear *D. mulli* from decaying parts of *P. beccariana* have thus far been unsuccessful (W. P. Mull, Biologist, pers. comm. 1994, p. 1; Science Panel 2005, p. 21).

Drosophila ochrobasis

Historically, *Drosophila ochrobasis* was widely distributed between 3,400–5,400 ft (1,035–1,645 m) above sea level on the island of Hawaii. *D. ochrobasis* has been recorded from 11 localities on 4 of the island's 5 volcanoes (Hualalai, Mauna Kea, Mauna Loa, and the Kohala mountains) (K. Kaneshiro, in litt. 2005a, p. 8; K. Magnacca, University of California at Berkley, in litt. 2006). The larvae of this species have been reported to feed within decomposing portions of three different host plant groups, *Myrsine* sp. (family Myrsinaceae), *Clermontia* sp. (family Campanulaceae), and *Marattia douglasii* (family Marattiaceae) within mesic to wet, montane, ohia, koa, and *Cheirodendron* sp. forest (Montgomery 1975, p. 98; Kaneshiro and Kaneshiro 1995, p. 29).

Kauai Species

Drosophila musaphilia

Drosophila musaphilia is historically known from only four sites, one at 1,900 ft (579 m) above sea level, and three sites between 2,600–3,700 ft (790–1,130 m) above sea level on the island of Kauai. Montgomery (1975, p. 97) determined that the host plant for *D. musaphilia* is *Acacia koa* (koa) occurring within mesic, montane, ohia and koa forest. The females lay their eggs on, and the larvae develop in, the moldy slime flux (seep) that occasionally appears on certain trees with injured plant tissue and seeping sap. Understanding the full range of *D. musaphilia* is difficult because its host plant is fairly common and stable within and surrounding its known range on Kauai; however, the frequency of suitable slime fluxes occurring on the host plant appears to be much more restricted and temporally unpredictable (Science Panel 2005, pp. 23–24).

Maui Species

Drosophila neoclavisetae

Two populations of *Drosophila neoclavisetae* were found historically along the Puu Kukui Trail within montane wet *Metrosideros polymorpha* (ohia) forests on West Maui. One habitat site was discovered in 1969 at 4,500 ft (1,370 m) and the other in 1975 at 3,500 ft (1,070 m) above sea level (Kaneshiro and Kaneshiro 1995, p. 26; K. Kaneshiro, in litt. 2005a, p. 11). The larval stage host plant of *D. neoclavisetae* has not yet been confirmed, although it is likely to be one or both of the two *Cyanea* sp. (C*yanea kunthiana and C. macrostegia* ssp. *macrostegia*) (family Campanulaceae) present within its range and occurring within wet, montane, ohia forest. Because both collections of this fly occurred within a small patch of *Cyanea* sp., and many other species in the *Drosophila adiastola* species group use plant species in this genus and other plants in the family Campanulaceae, researchers believe that one or both of the two *Cyanea* sp. found at Puu Kukui are the correct larval stage host plants for *D. neoclavisetae* (Science Panel 2005, pp. 19–20; Kaneshiro and Kaneshiro 1995, p. 26).

Molokai Species

Drosophila differens

Drosophila differens is historically known from three sites between 3,650–4,500 ft (1,115–1,370 m) above sea level, within montane wet ohia forest (K. Kaneshiro, in litt. 2005a, p. 2) on the island of Molokai. Montgomery (1975, p. 83) found that *D. differens* larvae feed within the decomposing bark and stems of *Clermontia* sp. (family Campanulaceae) within wet, montane, ohia forest (Kaneshiro and Kaneshiro 1995, p. 16).

Primary Constituent Elements

In accordance with section 3(5)(A)(i) of the Act and the regulations at 50 CFR 424.12, in determining which areas occupied at the time of listing to propose as critical habitat, we consider the primary constituent elements (PCEs) to be those physical and biological features that are essential to the conservation of the species and that may require special management considerations or protection. These include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, or rearing (or development) of offspring; and

(5) Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

We derived the specific primary constituent elements (PCEs) required for these 12 picture-wing flies from the biological needs of each species as described in the listing rule, published in the **Federal Register** on May 9, 2006 (71 FR 26835), and the August 15, 2006,

proposed critical habitat designation for 11 picture-wing flies (71 FR 46994).

Space for Individual and Population Growth and for Normal Behavior

The general life cycle of Hawaiian Drosophilidae is typical of that of most flies: After mating, females lay eggs from which larvae (immature stage) hatch; as larvae grow, they molt (shed their skin) through three successive stages (instars); and when fully grown, the larvae change into pupae (a transitional form) in which they metamorphose and emerge as adults.

Breeding for all 12 species of flies included in this revised proposal generally occurs year-round, but egg laying and larval development increase following the rainy season as the availability of decaying matter, upon which the flies feed, increases in response to the heavy rains (K. Kaneshiro, in litt. 2005b, pp. 1–2). In general, *Drosophila* lay between 50 and 200 eggs at a single time. Eggs develop into adults in about a month, and adults generally become sexually mature one month later. Adults generally live for one to two months.

It is unknown how much space is needed for these flies to engage in courtship and territorial displays, and mating activities. Adult behavior may be disrupted or modified by less than ideal conditions, such as decreased forest cover or loss of suitable food material (K. Kaneshiro, in litt. 2005b, pp. 1–2). Additionally, adult behavior may be disrupted and the flies themselves may be susceptible to the hunting activities of nonnative hymenoptera including yellow jacket wasps and ants (Kaneshiro and Kaneshiro 1995, pp. 41–42). The larvae generally pupate within the soil located below their host plant material, and it is presumed that they require relatively undisturbed and unmodified soil conditions to complete this stage before reaching adulthood (Science Panel 2005, p. 5). Lastly, it is well-known that these 12 species and most picture-wing flies are susceptible to even slight temperature increases, an issue that may be exacerbated by loss of suitable forest cover or the impacts from global warming (K. Kaneshiro, in litt. 2005b, pp. 1–2).

Food

Each species of Hawaiian picture-wing fly described in this document is found only on a single island, and the larvae of each are dependent upon only a single or a few related species of plants (summarized in Table 1). The adult flies feed on a variety of decomposing plant matter. The water or moisture requirements for all 12 of these species is unknown; however, during drier seasons or during times of drought, it is expected that available adult and larval stage food material in the form of decaying plant matter may decrease (K. Kaneshiro, in litt. 2005b, pp. 1–2).

Primary Constituent Elements for Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera, and D. tarphytrichia

Within the geographical areas occupied by each *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera, and D. tarphytrichia,* we must identify the PCEs that may require special management considerations or protections.

Based on the requisites for each species discussed above and our current knowledge of the life history, biology, and ecology of each species, and the requirements to sustain the essential life history functions of the 12 species, the following PCEs for larval and adult life stages of *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera,* and *D. tarphytrichia* are:

Oahu Species

The PCEs for *Drosophila aglaia* are: (1) Dry to mesic, lowland, *Diospyros* sp., ohia and koa forest between the elevations of 1,400–2,900 ft (425–885 m); and (2) the larval host plant *Urera glabra.*

The PCEs for *Drosophila hemipeza* are: (1) Dry to mesic, lowland, ohia and koa forest between the elevations of 1,500–2,900 ft (460–885 m); and (2) the larval host plants *Cyanea angustifolia, C. calycina, C. grimesiana* ssp. *grimesiana, C. grimesiana* ssp. *obatae, C. membranacea, C. pinnatifida, C. superba* ssp. *superba, Lobelia hypoleuca, L. niihauensis, L. yuccoides,* and *Urera kaalae.*

The PCEs for *Drosophila montgomeryi* are: (1) Mesic, lowland, diverse ohia and koa forest between the elevations of 1,900–2,900 ft (580–885 m); and (2) the larval host plant *Urera kaalae.*

The PCEs for *Drosophila obatai* are: (1) Dry to mesic, lowland, ohia and koa forest between the elevations of 1,500–2,500 ft (460–760 m); and (2) the larval host plant *Pleomele forbesii.*

The PCEs for *Drosophila substenoptera* are: (1) Mesic to wet, lowland to montane, ohia and koa forest between the elevations of 1,300–4,000 ft (395–1,220 m); and (2) the larval host plants *Cheirodendron platyphyllum* ssp. *platyphyllum, C. trigynum* ssp. *trigynum, Tetraplasandra kavaiensis,* and *T. oahuensis.*

The PCEs for *Drosophila tarphytrichia* are: (1) Dry to mesic, lowland, ohia and koa forest between the elevations of 1,900–2,900 ft (580–885 m); and (2) the larval host plant *Charpentiera obovata.*

Hawaii (Big Island) Species

The PCEs for *Drosophila heteroneura* are: (1) Mesic to wet, montane, ohia and koa forest between the elevations of 3,000–6,000 ft (915–1,830 m); and (2) the larval host plants *Cheirodendron trigynum* ssp. *trigynum, Clermontia clermontioides, C. clermontioides* ssp. *rockiana, C. hawaiiensis, C. kohalae, C. lindseyana, C. montis-loa, C. parviflora, C. peleana, C. pyrularia,* and *Delissea parviflora.*

The PCEs for *Drosophila mulli* are: (1) Wet, montane, ohia forest between the elevations of 3,150–3,250 ft (960–990 m); and (2) the larval host plant *Pritchardia beccariana.*

The PCEs for *Drosophila ochrobasis* are: (1) Mesic to wet, montane, ohia, koa, and *Cheirodendron* sp. forest between the elevations of 3,400–5,400 ft (1,035–1,645 m); and (2) the larval host plants *Clermontia calophylla, C. clermontioides, C. clermontioides* ssp. *rockiana, C. drepanomorpha, C. hawaiiensis, C. kohalae, C. lindseyana, C. montis-loa, C. parviflora, C. peleana, C. pyrularia, C. waimeae, Marattia douglasii, Myrsine lanaiensis, M. lessertiana,* and *M. sandwicensis.*

Kauai Species

The PCEs for *Drosophila musaphilia* are: (1) Mesic, montane, ohia and koa forest between the elevations of 2,600–3,700 ft (790–1,130 m); and (2) the larval host plant *Acacia koa.*

Maui Species

The PCEs for *Drosophila neoclavisetae* are: (1) Wet, montane, ohia forest between the elevations of 3,400–4,600 ft (1,040–1,400 m), and (2) the larval host plants *Cyanea kunthiana* and *C. macrostegia* ssp. *macrostegia.*

Molokai Species

The PCEs for *Drosophila differens* are: (1) Wet, montane, ohia forest between the elevations of 3,650–4,500 ft (1,115–1,370 m); and (2) the larval host plants *Clermontia arborescens* ssp. *waihiae, C. granidiflora* ssp. *munroi, C. kakeana, C. oblongifolia* ssp. *brevipes,* and *C. pallida.*

We propose units for designation based on sufficient PCEs being present

to support at least one of each of the 12 species' life history functions. Each of the areas proposed in this revised proposed rule have been determined to contain sufficient PCEs to provide for both the larval and adult life stage for *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera,* and *D. tarphytrichia.*

Special Management Considerations or Protections

When designating critical habitat, we assess whether the occupied areas contain features essential to the conservation of the species that may require special management considerations or protections.

Nonnative plants and animals pose the greatest threats to these 12 picture-wing flies. In order to counter the ongoing degradation and loss of habitat caused by feral ungulates and invasive nonnative plants, active management or control of nonnative species is necessary for the conservation of all populations of the 12 picture-wing flies (Kaneshiro and Kaneshiro 1995, pp. 37–38). Without active management or control, native habitat containing the features that are essential for the conservation of the 12 picture-wing flies will continue to be degraded or destroyed. In addition, habitat degradation and destruction as a result of fire, competition with nonnative insects, and predation by nonnative insects, such as the western yellow-jacket wasp (*Vespula pensylvanica*), may significantly threaten many of the populations of the 12 picture-wing flies.

In this revised proposed rule, all of the proposed critical habitat units for the 12 picture-wing flies may require special management to address feral ungulates, invasive nonnative plants, and yellow-jacket wasps. In addition, the units in dry or mesic habitats (see Table 1 above) may also require special management to address fire and ants. These threats are discussed below.

Feral Ungulates

Feral ungulates have devastated native vegetation in many areas of the Hawaiian Islands (Cuddihy and Stone 1990, pp. 60–66). Because the endemic Hawaiian flora evolved without the presence of browsing and grazing ungulates, many plant groups have lost their adaptive defenses such as spines, thorns, stinging hairs, and defensive chemicals (University of Hawaii Department of Geography 1998, p. 138). Pigs (*Sus scrofa*), goats (*Capra hircus*), and cattle (*Bos taurus*) disturb the soil, and readily eat native plants (including the native host plants for 1 or more of the 12 picture-wing flies), and distribute nonnative plant seeds that can alter the ecosystem. In addition, browsing and grazing by feral ungulates in steep and remote terrain causes severe erosion of entire watersheds due to foraging and trampling behaviors (Cuddihy and Stone 1990, pp. 60–64 and 66).

Feral Pigs (Sus scrofa)

Feral pigs threaten all populations of the 12 picture-wing flies. Feral pigs are found from dry coastal grasslands through rain forests and into the subalpine zone on all of the main Hawaiian Islands (Cuddihy and Stone 1990, pp. 64–65). An increase in pig densities and expansion of their distribution has caused widespread damage to native vegetation (Cuddihy and Stone 1990, pp. 64–65). Feral pigs create open areas within forest habitat by digging up, eating, and trampling native species (Stone 1985, pp. 262–263). These open areas become fertile ground for nonnative plant seeds spread through their excrement and by transport in their hair (Stone 1985, pp. 262–263). In nitrogen-poor soils, feral pig excrement increases nutrient availability, enhancing establishment of nonnative weeds that are more adapted to richer soils than are native plants (Cuddihy and Stone 1990, pp. 64–65). In this manner, largely nonnative forests replace native forest habitat (Cuddihy and Stone 1990, pp. 64–65).

Foote and Carson (1995, pp. 2–4) found that pig exclosures on the island of Hawaii supported significantly higher relative frequencies of picture-wing flies compared to other native and nonnative *Drosophila* species (7 percent of all observations outside of the exclosure and 18 percent of all observations inside the exclosure), and their native host plants. Loope et al. (1991, pp. 9–10 and 19) demonstrated that excluding pigs from a montane bog on northeastern Haleakala, Maui, resulted in an increase in native plant cover from 6 to 95 percent after 6 years of protection.

Feral Goats (Capra hircus)

Feral goats threaten populations of the picture-wing flies on Oahu (*Drosophila aglaia* and *D. obatai*), Hawaii (*D. heteroneura*), and Kauai (*D. musaphilia*). Feral goats occupy a wide variety of habitats on Kauai, Oahu, Molokai, Maui, and Hawaii, from lowland dry forests to montane grasslands where they consume native vegetation, trample roots and seedlings, accelerate erosion, and promote invasion of nonnative plants (van Riper and van Riper 1982, pp. 34–35; Stone 1985, p. 261). On Oahu, goat populations are increasing and spreading in the dry upper slopes of the Waianae Mountains, becoming an even greater threat to the native habitat (K. Kawelo, U.S. Army Environmental Division, pers. comm. 2005, p. 1).

Feral Cattle (Bos taurus)

Feral cattle threaten populations of *Drosophila heteroneura* on the island of Hawaii. Large-scale ranching of cattle began in the 19th century on the islands of Kauai, Oahu, Maui, and Hawaii (Cuddihy and Stone 1990, pp. 59–62). Large ranches, tens of thousands of acres in size, still exist on the islands of Maui and Hawaii (Cuddihy and Stone 1990, pp. 59–62). In addition, the grazing of cattle continues in several lowland regions in the northern portion of the Waianae Mountains of Oahu. Degradation of native forests used for ranching activities is evident. Feral cattle occupy a wide variety of habitats from lowland dry forests to montane grasslands, where they consume native vegetation, trample roots and seedlings, accelerate erosion, and promote the invasion of nonnative plants (van Riper and van Riper 1982, p. 36; Stone 1985, pp. 256 and 260).

Nonnative Plants

The invasion of nonnative plants contributes to the degradation of native forests and the host plants of picture-wing flies (Kaneshiro and Kaneshiro 1995, pp. 38–39; Wagner et al. 1999, pp. 52–53 and 971; Science Panel 2005, p. 28), and threatens all populations of the 12 picture-wing flies. Some nonnative plants form dense stands, thickets, or mats that shade or out-compete native plants. Nonnative vines cause damage or death to native trees by overloading branches, causing breakage, or forming a dense canopy cover that intercepts sunlight and shades out native plants below. Nonnative grasses readily burn and often grow at the border of forests, and carry fire into areas with woody native plants (Smith 1985, pp. 228–229; Cuddihy and Stone 1990, pp. 88–94). The nonnative grasses are more fire-adapted and can spread prolifically after a fire, ultimately creating a stand of nonnative grasses where native forest once existed. Some nonnative plant species produce chemicals that inhibit the growth of other plant species (Smith 1985, p. 228; Wagner et al. 1999, p. 971).

Fire

Fire threatens habitat of the Hawaiian picture-wing flies in dry to mesic grassland, shrubland, and forests on the islands of Kauai (*Drosophila musaphilia*), Oahu (*D. aglaia, D.*

hemipeza, D. mongomeryi, D. obatai, and *D. tarphytrichia*), and Hawaii (*D. heteroneura*). Dry and mesic regions in Hawaii have been altered in the past 200 years by an increase in fire frequency, a condition to which the native flora is not adapted. The invasion of fire-adapted alien plants, facilitated by ungulate disturbance, has contributed to wildfire frequency. This change in fire regime has reduced the amount of forest cover for native species (Hughes et al. 1991, p. 743; Blackmore and Vitousek 2000, p. 625) and resulted in an intensification of feral ungulate herbivory in the remaining native forest areas. Habitat damaged or destroyed by fire is more likely to be revegetated by nonnative plants that cannot be used as host plants by these picture-wing flies (Kaneshiro and Kaneshiro 1995, p. 47).

Nonnative Insect Competitors

Tipulid Flies

The Hawaiian Islands now support several established species of nonnative insects which compete with some of the 12 picture-wing flies within their larval stage host plants. The most important group of nonnative insect competitors includes tipulid flies (crane flies, family Tipulidae). The larvae of some species within this group feed within the decomposing bark of some of the host plants utilized by picture-wing flies, including *Charpentiera*, *Cheirodendron*, *Clermontia*, and *Pleomele* spp. (Science Panel 2005, p. 11; K. Magnacca, U.S. Geological Survey, *in litt.* 2005, p. 1; S. Montgomery, *in litt.* 2005a, p. 1). Therefore, all of the picture-wing flies addressed in this rule, except for *Drosophila mulli, D. musaphilia*, and *D. neoclavisetae* face larval-stage competition from nonnative tipulid flies. The tipulid larvae feed within the same portion of the decomposing host plant area normally occupied by the picture-wing fly larvae. The likely effect of this competition is a reduction in available host plant material for picture-wing fly larvae (Science Panel 2005, p. 11). In laboratory studies, Grimaldi and Jaenike (1984, p. 1) demonstrated that competition between *Drosophila* spp. larvae and other fly larvae can exhaust food resources, which affects both the probability of larval survival and the body size of adults, resulting in reduced adult fitness, fecundity, and lifespan.

Scolytid Beetles

Additionally, the Hawaiian Islands now support several species of nonnative beetles (family Scolytidae, genus *Coccotrypes*), a few of which bore into and feed on the nuts produced by certain native plant species including *Pritchardia beccariana*, the host plant of *Drosophila mulli*. Affected *Pritchardia* spp., including *P. beccariana*, drop their fruit before the nuts reach maturity due to the boring action of the scolytid beetles. Little natural regeneration of this host plant species has been observed in the wild since the arrival of this scolytid beetle (K. Magnacca, *in litt.* 2005, p. 1; Science Panel 2005, p. 11). Compared to the host plants of the other picture-wing flies, *P. beccariana* is long lived (up to 100 years), but over time scolytid beetles may have a significant impact on the availability of habitat for *D. mulli*.

Nonnative Insect Predators

Nonnative arthropods pose a serious threat to Hawaii's native *Drosophila*, both through direct predation or parasitism as well as competition for food or space (Howarth and Medeiros 1989, pp. 82–83; Howarth and Ramsay 1991, pp. 80–83; Kaneshiro and Kaneshiro 1995, pp. 40–45 and 47; Staples and Cowie 2001, pp. 41, 54–57). Due to their large colony sizes and systematic foraging habits, species of social Hymenoptera (ants and some wasps) and parasitic wasps pose the greatest predation threat to the Hawaiian picture-wing flies (Carson 1982, p. 1, 1986, p. 7; Gambino et al. 1987, pp. 169–170; Kaneshiro and Kaneshiro 1995, pp. 40–45 and 47).

Ants

Ants are believed to threaten populations of picture-wing flies in mesic areas on Oahu (*Drosophila aglaia, D. hemipeza, D. mongomeryi, D. obatai*, and *D. tarphytrichia*) and Hawaii (*D. heteroneura*) (Kaneshiro and Kaneshiro 1995, p. 43; Science Panel 2005, p. 28). At least 44 species of ants are known to be established on the Hawaiian Islands (Hawaii Ecosystems at Risk Project (HEAR) database, in litt. 2005, p. 2) and 4 particularly aggressive ant species have severely affected the native insect fauna (Zimmerman 1948, p. 173; HEAR database, in litt. 2005, p. 4). Ants are not a natural component of Hawaii's arthropod fauna, and native species evolved in the absence of predation pressure from ants. Ants can be particularly destructive predators because of their high densities, recruitment behavior, aggressiveness, and broad range of diet (Reimer 1993, pp. 14–15, 17). The threat to picture-wing flies is amplified by the fact that most ant species have winged reproductive adults (Borror 1989, pp. 737–738) and can quickly establish new colonies, spreading throughout suitable habitats (Staples and Cowie 2001, pp. 55–57). These attributes and the lack of native species' defenses to ants allow some ant species to destroy isolated prey populations (Nafus 1993, p. 151). Hawaiian picture-wing flies pupate in the ground where they are exposed to predation by ants. Newly emerging adults have been observed with ants attached to their legs (Kaneshiro and Kaneshiro 1995, p. 43).

Western Yellow-Jacket Wasp

An aggressive race of the western yellow-jacket wasp became established in the State of Hawaii in 1978, and this species is now abundant between 1,969–3,445 ft (600–1,050 m) in elevation (Gambino et al. 1990, p. 1,088). On Maui, yellow-jackets have been observed carrying and feeding upon recently captured adult Hawaiian *Drosophila* (Kaneshiro and Kaneshiro 1995, p. 41). While there is no documentation that conclusively ties the decrease in picture-wing fly observations at historical sites with the establishment of yellow-jacket wasps within their habitats, the concurrent arrival of wasps and decline of picture-wing fly observations for all 12 picture-wing flies on several of the islands (Kauai, Maui, Molokai, and Hawaii) suggests that the wasps may have played a significant role in the decline of some picture-wing fly populations (Carson 1982, p. 1, 1986, p. 7; Foote and Carson 1995, p. 3; Kaneshiro and Kaneshiro 1995; Science Panel 2005, p. 28).

Criteria Used To Identify Critical Habitat

In this revised proposed rule, we are proposing to designate critical habitat on lands with documented occurrences and that contain the primary constituent elements for these 12 Hawaiian picture-wing flies. The primary dataset we used to document observations of these 12 picture-wing flies spans the years 1965–1999 (K. Kaneshiro, in litt. 2005a, pp. 1–16). Additional data were obtained from individuals familiar with particular species and locations, and other sources of information as described in the above ''Methods'' section. Many sites were surveyed infrequently or have not been surveyed for a substantial period of time, while other sites have relatively complete records from 1966–1999. It is important to note that the traditional methods used to survey for the 12 species locate only adult flies. The adult flies of all of these species are generalist microbivores; in contrast, the larval stage typically requires a very specific host plant species (in some cases, several species or genera) for successful development. The primary constituent elements of the revised proposed critical

habitat include both the host plants used by the larvae, as well as the native forest components used by foraging adults. We used known adult location data to identify each critical habitat unit, and included the surrounding area encompassing the physical and biological features essential to the conservation of the species.

While there has been considerable survey work conducted for Hawaiian picture-wing flies overall, some areas where these 12 species are found have not been surveyed in many years. We used the results of the best available, recent survey information to develop the revised, initial working draft critical habitat unit maps for each species. In addition, one peer reviewer identified a population of *Drosophila ochrobasis* that was previously unknown to us in an area containing the features essential to the conservation of this species (K. Magnacca, in litt. 2006). This area has been included in this revised proposal (see Unit 19—West Kohala Mountains—*Drosophila ochrobasis*).

We used the best available, recent survey data for adult flies to determine which sites we would identify as occupied and which sites we would identify as unoccupied. Additionally, we did not include in this revised proposal some sites where a given species had been observed according to the most recent survey data if the area had either become degraded (e.g., due to loss or degradation of native vegetation, increase in nonnative vegetation, or documented presence of yellow-jacket wasps) and lacked PCEs, or if multiple surveys at a particular site over the course of several years failed to detect a species. However, we did not use the presence of yellow-jacket wasps alone to conclusively determine a site as being unoccupied, unless the habitat was also degraded in other respects. Lastly, it is important to point out that because of the time that has elapsed since some surveys were conducted, it is possible that some sites identified as unoccupied (and thus not included in this revised proposed critical habitat) have since been re-occupied by the species. Conversely, we recognize it may be possible that some sites that we have identified as occupied according to the most recent survey data may now be unoccupied. However, we believe that using the most recent survey results, in conjunction with information on existing habitat conditions, reflects the best available information for determining occupancy.

After identifying occupied sites for each of the 12 species on a series of maps, we added a Geographic Information System (GIS) layer of the known elevation range of a species in a given area. This elevation range was based upon the lowest and the highest elevation at which an adult fly of a given species was observed during surveys. After this step, GIS data points showing known locations of many of the flies' host plant species were added to the map series. Most of these plant data points were established during botanical surveys unrelated to the historic studies of the picture-wing flies. The larval stages for several of the 12 picture-wing flies are known to feed upon host plant species that are federally listed as endangered or threatened, identified as candidate species for listing under the Act, or identified as Federal species of concern. The data points for the listed and candidate host plant species were available to us from the State's Hawaii Biodiversity and Mapping Program (HBMP), and from survey information compiled from field biologists. For areas lacking host plant data points, we consulted HBMP literature regarding other plant species and/or queried *Drosophila* researchers and field biologists to determine which native host plants were present in those areas.

After generating multilayered GIS maps showing the occupied fly population sites, the known elevation range for each species, and the known host plant locations or habitat types, we prepared preliminary critical habitat unit maps. These preliminary unit maps were then overlaid on a series of satellite imagery and aerial photographs, and examined closely to identify the best quality areas containing contiguous forest and essential features. We then met individually with several *Drosophila* researchers (see the ''Methods'' section above) to review the different series of maps for each species and to confirm whether the preliminary unit maps included PCEs essential to both life stages (larval and adult) of each fly species. Based on these discussions, we adjusted the preliminary unit map boundaries by adding areas identified by the researchers that contain features essential to the conservation of the species, or by removing areas unlikely to contain these features. The critical habitat unit boundaries shown in the maps included in this revised proposed rule reflect the results of this analysis, after taking into account the presence of known developed areas, as described below.

In summary, we identified proposed critical habitat units that: Contain occupied population sites based on the most recent survey information; are known to contain the PCEs essential to both the larval and adult fly life stage for each species; and contain relatively contiguous native or functional native forest.

Lastly, when determining proposed critical habitat boundaries within this revised proposed rule, we made every effort to avoid including developed areas such as buildings, paved areas, and other structures that lack PCEs for *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera*, and *D. tarphytrichia*. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed areas. Any such structures and the land under them inadvertently left inside critical habitat boundaries shown on the maps published with this proposed rule have been excluded by text in this revised proposed rule and are not proposed for designation as critical habitat. Therefore, Federal actions involving these areas would not trigger section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the primary constituent elements in the adjacent critical habitat.

Revised Proposed Critical Habitat Designation

We are proposing 32 units as critical habitat for *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera*, and *D. tarphytrichia*. In total, approximately 9,238 ac (3,738 ha) fall within the boundaries of this revised proposed critical habitat designation. The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat for the 12 Hawaiian picture-wing flies.

The areas we propose as critical habitat are:

(1) Island of Oahu: *Drosophila aglaia*—Unit 1—Palikea; *Drosophila aglaia*—Unit 2—Puu Kaua; *Drosophila hemipeza*—Unit 1—Kaluaa Gulch; *Drosophila hemipeza*—Unit 2—Makaha Valley; *Drosophila hemipeza*—Unit 3—Palikea; *Drosophila hemipeza*—Unit 4—Puu Kaua; *Drosophila montgomeryi*—Unit 1—Kaluaa Gulch; *Drosophila montgomeryi*—Unit 2—Palikea; *Drosophila montgomeryi*—Unit 3—Puu Kaua; *Drosophila obatai*—Unit 1—Puu Pane; *Drosophila obatai*—Unit 2—Wailupe; *Drosophila substenoptera*—Unit 1—Mt. Kaala; *Drosophila substenoptera*—Unit 2—Palikea;

Drosophila tarphytrichia—Unit 1—Kaluaa Gulch; *Drosophila tarphytrichia*—Unit 2—Palikea; and *Drosophila tarphytrichia*—Unit 3—Puu Kaua;

(2) Hawaii (Big Island): *Drosophila heteroneura*—Unit 1—Kau Forest; *Drosophila heteroneura*—Unit 2—Kona Refuge; *Drosophila heteroneura*—Unit 3—Lower Kahuku; *Drosophila heteroneura*—Unit 4—Pit Crater; *Drosophila heteroneura*—Unit 5—Waihaka Gulch; *Drosphila mulli*—Unit 1—Olaa Forest; *Drosphila mulli*—Unit 2—Stainback Forest; *Drosphila mulli*—Unit 3—Waiakea Forest; *Drosophila ochrobasis*—Unit 1—Kipuka 9; *Drosophila ochrobasis*—Unit 2—Kipuka 14; *Drosophila ochrobasis*—Unit 3—Kohala Mountains East; *Drosophila ochrobasis*—Unit 4—Kohala Mountains West; and *Drosophila ochrobasis*—Unit 5—Upper Kahuku;

(3) Island of Kauai: *Drosophila musaphilia*—Unit 1—Kokee;

(4) Island of Maui: *Drosophila neoclavisetae*—Unit 1—Puu Kukui;

(5) Island of Molokai: *Drosophila differens*—Unit 1—Puu Kolekole.

The areas identified as containing the features essential to the conservation of each of the 12 Hawaiian picture-wing flies for which we are proposing critical habitat include a variety of undeveloped, forested areas that are used for larval stage development and adult fly stage foraging. Proposed critical habitat includes land under Federal, State, City and County, and private ownership. The approximate area and land ownership of each proposed critical habitat unit are shown in Table 2.

TABLE 2.—PROPOSED CRITICAL HABITAT UNITS FOR DROSOPHILA AGLAIA, D. DIFFERENS, D. HEMIPEZA, D. HETERONEURA, D. MONTGOMERYI, D. MULLI, D. MUSAPHILIA, D. NEOCLAVISETAE, D. OBATAI, D. OCHROBASIS, D. SUBSTENOPTERA, AND D. TARPHYTRICHIA

[Area estimates reflect all land within critical habitat unit boundaries.]

Proposed critical habitat unit	Size of unit in acres	Size of unit in hectares	Land ownership (acres)			
			Federal	State	City & Co. of Honolulu	Private
Oahu Units						
Drosophila aglaia—Unit 1—Palikea	208	84	0	4	0	204
Drosophila aglaia—Unit 2—Puu Kaua	87	35	0	0	0	87
Drosophila hemipeza—Unit 1—Kaluaa Gulch	527	213	0	0	0	527
Drosophila hemipeza—Unit 2—Makaha Valley	111	45	0	40	71	0
Drosophila hemipeza—Unit 3—Palikea	(208)	(84)	0	(4)	0	(204)
Drosophila hemipeza—Unit 4—Puu Kaua	(87)	(35)	0	0	0	(87)
Drosophila montgomeryi—Unit 1—Kaluaa Gulch	(527)	(213)	0	0	0	(527)
Drosophila montgomeryi—Unit 2—Palikea	(208)	(84)	0	(4)	0	(204)
Drosophila montgomeryi—Unit 3—Puu Kaua	(87)	(35)	0	0	0	(87)
Drosophila obatai—Unit 1—Puu Pane	33	13	0	33	0	0
Drosophila obatai—Unit 2—Wailupe	77	31	0	45	0	32
Drosophila substenoptera—Unit 1—Mt. Kaala	116	47	0	59	57	0
Drosophila substenoptera—Unit 2—Palikea	(208)	(84)	0	(4)	0	(204)
Drosophila tarphytrichia—Unit 1—Kaluaa Gulch	(527)	(213)	0	0	0	(527)
Drosophila tarphytrichia—Unit 2—Palikea	(208)	(84)	0	(4)	0	(204)
Drosophila tarphytrichia—Unit 3—Puu Kaua	(87)	(35)	0	0	0	(87)
Hawaii (Big Island) Units						
Drosophila heteroneura—Unit 1—Kau Forest	125	51	0	125	0	0
Drosophila heteroneura—Unit 2—Kona Refuge	3,604	1,459	3,604	0	0	0
Drosophila heteroneura—Unit 3—Lower Kahuku	687	278	687	0	0	0
Drosophila heteroneura—Unit 4—Pit Crater	46	18	0	0	0	46
Drosophila heteroneura—Unit 5—Waihaka Gulch	120	49	0	120	0	0
Drosophila mulli—Unit 1—Olaa Forest	244	99	0	244	0	0
Drosophila mulli—Unit 2—Stainback Forest	76	31	0	76	0	0
Drosophila mulli—Unit 3—Waiakea Forest	373	151	0	373	0	0
Drosophila ochrobasis—Unit 1—Kipuka 9	9	4	0	9	0	0
Drosophila ochrobasis—Unit 2—Kipuka 14	15	6	0	15	9	0
Drosophila ochrobasis—Unit 3—Kohala Mountains East	193	78	0	193	0	0
Drosophila ochrobasis—Unit 4—Kohala Mountains West	132	54	0	41	0	91
Drosophila ochrobasis—Unit 5—Upper Kahuku	88	36	64	24	0	0
Kauai Unit						
Drosophila musaphilia—Unit 1—Kokee	794	321	0	794	0	0
Maui Unit						
Drosophila neoclavisetae—Unit 1—Puu Kukui	584	237	0	134	0	450
Molokai Unit						
Drosophila differens—Unit 1—Puu Kolekole	988	400	0	0	0	988

TABLE 2.—PROPOSED CRITICAL HABITAT UNITS FOR DROSOPHILA AGLAIA, D. DIFFERENS, D. HEMIPEZA, D. HETERONEURA, D. MONTGOMERYI, D. MULLI, D. MUSAPHILIA, D. NEOCLAVISETAE, D. OBATAI, D. OCHROBASIS, D. SUBSTENOPTERA, AND D. TARPHYTRICHIA—Continued

[Area estimates reflect all land within critical habitat unit boundaries.]

Proposed critical habitat unit	Size of unit in acres	Size of unit in hectares	Land ownership (acres)			
			Federal	State	City & Co. of Honolulu	Private
Total (32 units)	9,238	3,738	4,356	2,331	128	2,424

Key: Unit areas in parentheses overlap with other units. Therefore, the total area being proposed as critical habitat for each species will not equal the total area being proposed for the 12 species combined because of this overlap.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the 12 picture-wing flies, below. All of the proposed critical habitat units for the 12 Hawaiian picture-wing flies were occupied by the species at the time of listing. Each unit contains sufficient PCEs to provide for both the larval and adult life stage of one or more of the 12 species of picture-wing flies, and may require special management considerations or protection (see Table 3).

TABLE 3.—CRITICAL HABITAT UNITS PROPOSED FOR DROSOPHILA AGLAIA, D. DIFFERENS, D. HEMIPEZA, D. HETERONEURA, D. MONTGOMERYI, D. MULLI, D. MUSAPHILIA, D. NEOCLAVISETAE, D. OBATAI, D. OCHROBASIS, D. SUBSTENOPTERA, AND D. TARPHYTRICHIA AND POTENTIAL THREATS TO THE SPECIES PRIMARY CONSTITUENT ELEMENTS

Proposed critical habitat unit	Threats					
	Feral ungulates	Nonnative plants	Yellow-jacket wasps	Ants	Nonnative competitors	Fire
Drosophila aglaia—Unit 1—Palikea	X	X		X	X	X
Drosophila aglaia—Unit 2—Puu Kaua	X	X		X	X	X
Drosophila hemipeza—Unit 1—Kaluaa Gulch	X	X		X	X	X
Drosophila hemipeza—Unit 2—Makaha Valley	X	X		X	X	X
Drosophila hemipeza—Unit 3—Palikea	X	X		X	X	X
Drosophila hemipeza—Unit 4—Puu Kaua	X	X		X	X	X
Drosophila montgomeryi—Unit 1—Kaluaa Gulch	X	X		X	X	X
Drosophila montgomeryi—Unit 2—Palikea	X	X		X	X	X
Drosophila montgomeryi—Unit 3—Puu Kaua	X	X		X	X	X
Drosophila obatai—Unit 1—Puu Pane	X	X		X	X	X
Drosophila obatai—Unit 2—Wailupe	X	X		X	X	X
Drosophila substenoptera—Unit 1—Mt. Kaala	X	X			X	
Drosophila substenoptera—Unit 2—Palikea	X	X			X	
Drosophila tarphytrichia—Unit 1—Kaluaa Gulch	X	X		X	X	X
Drosophila tarphytrichia—Unit 2—Palikea	X	X		X	X	X
Drosophila tarphytrichia—Unit 3—Puu Kaua	X	X		X	X	X
Drosophila heteroneura—Unit 1—Kau Forest	X	X	X	X	X	
Drosophila heteroneura—Unit 2—Kona Refuge	X	X	X	X	X	
Drosophila heteroneura—Unit 3—Lower Kahuku	X	X	X	X	X	
Drosophila heteroneura—Unit 4—Pit Crater	X	X	X	X	X	X
Drosophila heteroneura—Unit 5—Waihaka Gulch	X	X	X	X	X	
Drosophila mulli—Unit 1—Olaa Forest	X	X	X		X	
Drosophila mulli—Unit 2—Stainback Forest	X	X	X		X	
Drosophila mulli—Unit 3—Waiakea Forest	X	X	X	X	X	
Drosophila ochrobasis—Unit 1—Kipuka 9	X	X	X		X	
Drosophila ochrobasis—Unit 2—Kipuka 14	X	X	X		X	

TABLE 3.—CRITICAL HABITAT UNITS PROPOSED FOR DROSOPHILA AGLAIA, D. DIFFERENS, D. HEMIPEZA, D. HETERONEURA, D. MONTGOMERYI, D. MULLI, D. MUSAPHILIA, D. NEOCLAVISETAE, D. OBATAI, D. OCHROBASIS, D. SUBSTENOPTERA, AND D. TARPHYTRICHIA AND POTENTIAL THREATS TO THE SPECIES PRIMARY CONSTITUENT ELEMENTS—Continued

Proposed critical habitat unit	Threats					
	Feral ungulates	Nonnative plants	Yellow-jacket wasps	Ants	Nonnative competitors	Fire
Drosophila ochrobasis—Unit 3—Kohala Mountains East	X	X	X		X	
Drosophila ochrobasis—Unit 4—Kohala Mountains West	X	X	X		X	
Drosophila ochrobasis—Unit 5—Upper Kahuku	X	X	X		X	
Drosophila musaphilia—Unit 1—Kokee	X	X	X	X		X
Drosophila neoclavisetae—Unit 1—Puu Kukui	X	X	X			
Drosophila differens—Unit 1—Puu Kolekole	X	X	X		X	

As provided under section 4(b)(2) of the Act, these units may be considered for exclusion from critical habitat when this rule is finalized. Exclusions are considered based on the relative costs and benefits of designating critical habitat, including information contained in the forthcoming economic analysis.

Oahu Units

Drosophila aglaia—Unit 1—Palikea consists of 208 ac (84 ha) of lowland, mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,920–2,985 ft (585–910 m), this unit is privately and State-owned, and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. aglaia* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Urera glabra.*

Drosophila aglaia—Unit 2—Puu Kaua consists of 87 ac (35 ha) of lowland, diverse mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,865–2,855 ft (570–870 m), this unit is privately owned and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. aglaia* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Urera glabra.*

Drosophila hemipeza—Unit 1—Kaluaa Gulch consists of 527 ac (213 ha) of diverse, mesic forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,720–2,785 ft (525–850 m), this unit is privately owned and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. hemipeza* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Urera kaalae, Cyanea* sp., and *Lobelia* sp.

Drosophila hemipeza—Unit 2—Makaha Valley consists of 111 ac (45 ha) of lowland, mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,995–3,005 ft (610–915 m), this unit is owned by the City and County of Honolulu and the State, and is largely managed as a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 4–5), this unit was occupied by *D. hemipeza* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Urera kaalae, Cyanea* sp., and *Lobelia* sp.

Drosophila hemipeza—Unit 3—Palikea consists of 208 ac (84 ha) of lowland, mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,920–2,985 ft (585–910 m), this unit is privately and State-owned, and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. hemipeza* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Urera kaalae, Cyanea* sp., and *Lobelia* sp.

Drosophila hemipeza—Unit 4—Puu Kaua consists of 87 ac (35 ha) of lowland, diverse mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,865–2,855 ft (570–870 m), this unit is privately owned and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. hemipeza* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Urera kaalae, Cyanea* sp., and *Lobelia* sp.

Drosophila montgomeryi—Unit 1—Kaluaa Gulch consists of 527 ac (213 ha) of diverse, mesic forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,720–2,785 ft (525–850 m), this unit is privately owned and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH.

According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. montgomeryi* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Urera kaalae.*

Drosophila montgomeryi—Unit 2—Palikea consists of 208 ac (84 ha) of lowland, mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,920–2,985 ft (585–910 m), this unit is both privately and State-owned, and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. montgomeryi* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Urera kaalae.*

Drosophila montgomeryi—Unit 3—Puu Kaua consists of 87 ac (35 ha) of lowland, diverse mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,865–2,855 ft (570–870 m), this unit is privately owned and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. montgomeryi* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Urera kaalae.*

Drosophila obatai—Unit 1—Puu Pane consists of 33 ac (13 ha) of lowland, mesic, koa, and ohia forest within the northeastern Waianae Mountains of Oahu. Ranging in elevation between 1,760–2,535 ft (535–770 m), this unit is owned by the State and is largely managed as part of a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 6), this unit was occupied by *D. obatai* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species.

This unit also encompasses the larval stage host plant associated with this species, *Pleomele forbesii.*

Drosophila obatai—Unit 2—Wailupe consists of 77 ac (31 ha) of lowland, mesic, koa, and ohia forest within the southeastern Koolau Mountains of Oahu. Ranging in elevation between 1,475–2,155 ft (445–655 m), this unit is privately and State-owned, and is largely managed as part of a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 6), this unit was occupied by *D. obatai* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Pleomele forbesii.*

Drosophila substenoptera—Unit 1—Mt. Kaala consists of 116 ac (47 ha) of montane, wet, ohia forest within the northern Waianae Mountains of Oahu. Ranging in elevation between 2,750–4,030 ft (840–1,230 m), this unit is owned by the City and County of Honolulu and the State, and is largely managed as part of a State forest reserve and natural area reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 7), this unit was occupied by *D. substenoptera* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Cheirodendron* sp. and *Tetraplasandra* sp.

Drosophila substenoptera—Unit 2—Palikea consists of 208 ac (84 ha) of lowland, mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,920–2,985 ft (585–910 m), this unit is privately and State-owned, and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. substenoptera* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Cheirodendron* sp. and *Tetraplasandra* sp.

Drosophila tarphytrichia—Unit 1—Kaluaa Gulch consists of 527 ac (213 ha) of diverse, mesic forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,720–2,785 ft (525–850 m), this unit is privately owned and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. tarphytrichia* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Charpenteira obovata.*

Drosophila tarphytrichia—Unit 2—Palikea consists of 208 ac (84 ha) of lowland, mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,920–2,985 ft (585–910 m), this unit is privately and State-owned, and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. tarphytrichia* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Charpenteira obovata.*

Drosophila tarphytrichia—Unit 3—Puu Kaua consists of 87 ac (35 ha) of lowland, diverse mesic, koa, and ohia forest within the southern Waianae Mountains of Oahu. Ranging in elevation between 1,865–2,855 ft (570–870 m), this unit is privately owned and is part of a larger area called the Honouliuli Preserve, administered and managed by TNCH. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 1–10), this unit was occupied by *D. tarphytrichia* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Charpenteira obovata.*

Hawaii (Big Island) Units

Drosophila heteroneura—Unit 1—Kau Forest consists of 125 ac (51 ha) of montane, wet, ohia forest, and is located on the southern flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 5,215–5,510 ft (1,590–1,680 m), the unit is owned by the State, and is largely managed as part of a State forest reserve. According to the most recent survey data (K.

Kaneshiro, in litt. 2005a, p. 8), this unit was occupied by *D. heteroneura* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Cheirodendron trigynum, Clermontia* sp., and *Delissea parviflora.*

Drosophila heteroneura—Unit 2—Kona Refuge consists of 3,604 ac (1,459 ha) of montane, mesic, closed koa and ohia forest, and is located on the western flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 2,980–5,755 (910–1,755 m), this unit is owned by the Service, and is managed as part of the Kona Unit of the Hakalau Forest National Wildlife Refuge. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 8), this unit was occupied by *D. heteroneura* at the time of listing.

This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Cheirodendron trigynum, Clermontia* sp., and *Delissea parviflora.*

Drosophila heteroneura—Unit 3—Lower Kahuku consists of 687 ac (278 ha) of montane, mesic to wet, ohia forest, and is located on the southern flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 3,705–4,685 ft (1,130–1,430 m), this unit is owned and managed by the National Park Service (NPS) (Hawaii Volcanoes National Park). According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 8), this unit was occupied by *D. heteroneura* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Cheirodendron trigynum, Clermontia* sp., and *Delissea parviflora.*

Drosophila heteroneura—Unit 4—Pit Crater consists of 46 ac (18 ha) of montane, mesic, open ohia forest with mixed grass species, and is located on the western flank of Hualalai and south of the Kaupulehu lava flow on the island of Hawaii. Ranging in elevation between 3,835–4,525 ft (1,170–1,380 m), this unit is privately owned and managed. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 8), this unit was occupied by *D. heteroneura* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Cheirodendron trigynum, Clermontia* sp., and *Delissea parviflora.*

Drosophila heteroneura—Unit 5—Waihaka Gulch consists of 120 ac (49 ha) of montane, wet, koa and ohia forest, and is located on the southern flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 4,065–4,390 ft (1,240–1,340 m), the unit is owned by the State, and is largely managed as part of a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 8), this unit was occupied by *D. heteroneura* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Cheirodendron trigynum, Clermontia* sp., and *Delissea parviflora.*

Drosophila mulli—Unit 1—Olaa Forest consists of 244 ac (99 ha) of montane, wet, ohia forest and is located to the northeast of Kilauea Caldera on the southeastern flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 3,120–3,300 ft (950–1,005 m), this unit is owned by the State, and is largely managed as part of a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 10), this unit was occupied by *D. mulli* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Pritchardia beccariana.*

Drosophila mulli—Unit 2—Stainback Forest consists of 76 ac (31 ha) of montane, wet, ohia forest, and is located to the northeast of Kilauea Caldera on the southeastern flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 1,955–2,165 ft (595–660 m), this unit is owned by the State and is largely managed as part of a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 10), this unit was occupied by *D. mulli* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Pritchardia beccariana.*

Drosophila mulli—Unit 3—Waiakea Forest consists of 373 ac (151 ha) of montane, wet, ohia forest, and is located to the northeast of Kilauea Caldera on the southeastern flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 3,130–3,585 ft (955–1,095 m), this unit is owned by the State and is largely managed as part of a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 10), this unit was occupied by *D. mulli* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Pritchardia beccariana.*

Drosophila ochrobasis—Unit 1—Kipuka 9 consists of 9 ac (4 ha) of montane, wet, ohia forest with native shrubs, and is located within the saddle road area on the northeastern flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 5,075–5,125 ft (1,545–1,560 m), this unit is owned by the State and is largely managed as part of a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 10), this unit was occupied by *D. ochrobasis* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Clermontia* sp., *Marattia douglasii,* and *Myrsine* sp.

Drosophila ochrobasis—Unit 2—Kipuka 14 consists of 15 ac (6 ha) of montane, wet, ohia forest with native shrubs, and is located within the saddle road area on the northeastern flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 5,105–5,145 ft (1,555–1,570 m), this unit is owned by the State and is largely managed as part of a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 12–13), this unit was occupied by *D. ochrobasis* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Clermontia* sp., *Marattia douglasii,* and *Myrsine* sp.

Drosophila ochrobasis—Unit 3—Kohala Mountains East consists of 193

ac (78 ha) of montane, wet, ohia forest with native shrubs and mixed grass species, and is located on the southeastern flank of the Kohala Mountains on the island of Hawaii. Ranging in elevation between 3,850–4,140 ft (1,175–1,260 m), this unit is owned by the State and is largely managed as part of a State forest reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 12–13), this unit was occupied by *D. ochrobasis* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Clermontia* sp., *Marattia douglasii,* and *Myrsine* sp.

Drosophila ochrobasis—Unit 4—Kohala Mountains West consists of 132 ac (54 ha) of montane, wet, ohia forest with native shrubs and mixed grass species, and is located on the southwestern flank of the Kohala Mountains on the island of Hawaii. Ranging in elevation between 4,945–5,325 ft (1,510–1,625 m), this unit is privately and State-owned, and is largely managed as part of a State forest reserve. *Drosophila ochrobasis* was not historically known from this area, but was first observed here during field surveys in 2006 (K. Magnacca, in litt. 2006, p. 1). Based upon those positive observations and the relatively intact, closed-canopy, native forest, including the fly's host plant species found within this unit, we have determined that it was occupied by *D. ochrobasis* at the time of the listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Clermontia* sp., *Marattia douglasii,* and *Myrsine* sp.

Drosophila ochrobasis—Unit 5—Upper Kahuku consists of 88 ac (36 ha) of montane, wet, ohia forest, and is located on the southern flank of Mauna Loa on the island of Hawaii. Ranging in elevation between 5,235–5,390 ft (1,595–1,645 m), the unit is owned by the State and the National Park Service (Hawaii Volcanoes National Park). The area within this unit is largely managed as part of a State forest reserve and as a national park. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, pp. 12–13), this unit was occupied by *D. ochrobasis* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plants associated with this species, *Clermontia* sp., *Marattia douglasii,* and *Myrsine* sp.

Kauai Unit

Drosophila musaphilia—Unit 1—Kokee consists of 794 ac (321 ha) of montane, mesic koa and ohia forest, and is located in the Kokee region of northwestern Kauai. Ranging in elevation between 3,310–3,740 ft (1,010–1,140 m), this unit is owned by the State and occurs on lands managed as part of a State park, forest reserve, and natural area reserve. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 11), this unit was occupied by *D. musaphilia* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Acacia koa.*

Maui Unit

Drosophila neoclavisetae—Unit 1—Puu Kukui consists of 584 ac (237 ha) of montane, wet, ohia forest within the west Maui mountains on the island of Maui. Ranging in elevation between 3,405–4,590 ft (1,040–1,400 m), this unit is both privately and State-owned. Much of the area within this unit occurs within the boundary of the Puu Kukui Watershed Preserve, lands jointly managed by TNCH, the State, and the Maui Land and Pineapple Company. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 11), this unit was occupied by *D. neoclavisetae* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Cyanea kunthiana, C. macrostegia* ssp. *macrostegia.*

Molokai Unit

Drosophila differens—Unit 1—Puu Kolekole consists of 988 ac (400 ha) of montane, wet, ohia forest within the eastern Molokai mountains on the island of Molokai. Ranging in elevation between 3,645–4,495 ft (1,110–1,370 m), this unit is privately owned and is managed by TNCH as part of the Kamakou and Pelekunu preserves. According to the most recent survey data (K. Kaneshiro, in litt. 2005a, p. 11), this unit was occupied by *D. differens* at the time of listing. This unit includes the known elevation range, moisture regime, and the native forest components used by foraging adults and identified as the PCEs for this species. This unit also encompasses the larval stage host plant associated with this species, *Clermontia* sp.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the Service, to ensure that actions they fund, authorize, or carry out are not likely to destroy or adversely modify critical habitat. Decisions by the 5th and 9th Circuit Court of Appeals have invalidated our definition of ''destruction or adverse modification'' (50 CFR 402.02) (see *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service,* 378 F. 3d 1059 (9th Cir. 2004) and *Sierra Club* v. *U.S. Fish and Wildlife Service et al.,* 245 F.3d 434, 442F (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the statutory provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would remain functional (or retain the current ability for the PCEs to be functionally established) to serve its intended conservation role for the species.

If a species is listed or critical habitat is designated, section 7(a)(2) of the Act requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of the species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. As a result of this consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat, we also provide reasonable and prudent alternatives to the project, if any are identifiable. We

define ''Reasonable and prudent alternatives'' at 50 CFR 402.02 as alternative actions identified during consultation that:

- Can be implemented in a manner consistent with the intended purpose of the action,
- Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,
- Are economically and technologically feasible, and
- Would, in the Director's opinion, avoid jeopardizing the continued existence of the listed species or destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies may sometimes need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Federal activities that may affect *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera,* and *D. tarphytrichia* or their designated critical habitat will require section 7 consultation under the Act. Activities on State, Tribal, local, or private lands requiring a Federal permit (such as a permit from the U.S. Army Corps of Engineers under section 404 of the Clean Water Act (33 U.S.C. 1251 et seq.) or a permit from us under section 10 of the Act) or involving some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency) are also be subject to the section 7 consultation process. Federal actions not affecting listed species or critical habitat, and actions on State, Tribal, local, or private lands that are not federally funded, authorized, or permitted, do not require section 7 consultations.

Application of the ''Adverse Modification'' Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species, or would retain its current ability for the primary constituent elements to be functionally established. Activities that may destroy or adversely modify critical habitat are those that alter the PCEs to an extent that appreciably reduces the conservation value of critical habitat for *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera,* and *D. tarphytrichia.* Generally, the conservation role of the critical habitat units is to support the populations of these species as identified in this revised proposed rule.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation.

Activities that, when carried out, funded, or authorized by a Federal agency, may affect critical habitat and therefore should result in consultation for *Drosophila aglaia, D. differens, D. hemipeza, D. heteroneura, D. montgomeryi, D. mulli, D. musaphilia, D. neoclavisetae, D. obatai, D. ochrobasis, D. substenoptera,* and *D. tarphytrichia* include, but are not limited to:

(1) The following activities may result in adverse modification if they are likely to affect the PCEs of the 12 picture-wing flies: Overgrazing; control of feral ungulates; clearing or cutting of native live trees and shrubs, whether by burning or mechanical, chemical, or other means (e.g., woodcutting, bulldozing, construction, road building, mining, herbicide application); introducing or enabling the spread of nonnative species (e.g., nonnative plant species that may compete with native host plants, or nonnative arthropod pests that prey upon native host plants); and taking actions that pose a risk of fire.

(2) Construction where a permit under section 404 of the Clean Water Act would be required by the U.S. Army Corps of Engineers. Construction in wetlands, where a 404 permit would be required, could affect the habitat of *Drosophila heteroneura.*

(3) Recreational activities that appreciably degrade vegetation.

(4) The purposeful release or augmentation of any dipteran predator or parasitoid.

Exemptions and Exclusions

Application of Section 4(a)(3)(B) of the Act

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resource management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

- An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;
- A statement of goals and priorities;
- A detailed description of management actions to be implemented to provide for these ecological needs; and
- A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: ''The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.''

We consult with the military on the development and implementation of INRMPs for installations with listed species. INRMPs developed by military installations located within the range of this revised proposed critical habitat

designation for *Drosophila aglaia* and *D. substenoptera* were analyzed for exemption under the authority of section 4(a)(3) of the Act.

Approved INRMPs

West Range of Schofield Barracks Military Reservation

The U.S. Army completed its Oahu INRMP in 2000, and the INRMP was approved by the Service in 2001. Conservation measures included in the INRMP that benefit *Drosophila aglaia* and *D. substenoptera* include (1) outplanting of native plants which provides for the natural forest conditions necessary for adult fly foraging by both species; (2) feral ungulate control which prevents both direct loss of the larval stage host plants and adult foraging substrate of both species and prevents habitat alteration by feral ungulates; (3) wildland fire control which prevents both loss and alteration of habitat for *D. aglaia;* and (4) nonnative plant control which prevents habitat alteration for both species.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that conservation efforts identified in the U.S. Army Garrison Hawaii Oahu Training Areas Natural Resource Management (Final Report August 2000) and the Oahu INRMP 2002–2006 (Army 2000) will provide benefits to *Drosophila aglaia* and *D. substenoptera* occurring in habitats within or adjacent to the West Range of Schofield Barracks Military Reservation. The other 10 species of picture-wing flies do not occur on Army land. Therefore, this installation is exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 78 ac (31 ha) of habitat on Oahu in this revised proposed critical habitat designation because of this exemption.

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary must designate and revise critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

Under section 4(b)(2) of the Act, in considering whether to exclude a particular area from the designation, we must identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and determine whether the benefits of exclusion outweigh the benefits of inclusion. If we consider an exclusion, then we must determine whether excluding the area would result in the extinction of the species.

We are conducting an economic analysis of the impacts of this revised proposed critical habitat designation and related factors, which will be available for public review and comment when it is complete. Based on public comment on that document, this revised proposed designation itself, and the information in the final economic analysis, the Secretary may exclude from critical habitat additional areas beyond those identified in this assessment under the provisions of section 4(b)(2) of the Act. This is also addressed in our implementing regulations at 50 CFR 424.19.

Under section 4(b)(2) of the Act, we must consider all relevant impacts, including economic impacts. We consider a number of factors in a section 4(b)(2) analysis. For example, we consider whether there are lands owned or managed by the Department of Defense (DOD) where a national security impact might exist. We also consider whether the landowners have developed any conservation plans for the area, or whether there are conservation partnerships that would be encouraged by designation of, or exclusion from, critical habitat. In addition, we look at any Tribal issues, and consider the government-to-government relationship of the United States with tribal entities. We also consider any social impacts that might occur because of the designation.

In preparing this revised proposal, we have determined that the lands within the revised proposed designation of critical habitat for the 12 picture-wing flies are not owned or managed by the Department of Defense, there are currently no HCPs for these species, and the proposed designation does not include any Tribal lands or trust resources.

We anticipate no impact to national security, Tribal lands, partnerships, or HCPs from this revised proposed critical habitat designation. Based on the best available information, we believe that all of these units contain the features essential to the species. Therefore, we are not proposing to exclude any areas under section 4(b)(2) of the Act at this time. However, based on public comment on this revised proposed critical habitat designation and the economic analysis, and the information in the economic analysis itself, we may exclude areas from the final critical habitat designation under section 4(b)(2) of the Act.

Economic Analysis

We are preparing an analysis of the economic impacts of this revised proposed critical habitat for the 12 picture-wing flies from the Hawaiian Islands. We will announce the availability of the draft economic analysis as soon as it is completed, at which time we will seek public review and comment. At that time, copies of the draft economic analysis will be available for downloading from the Internet at *http://www.fws.gov/pacificislands*, or by contacting the Pacific Islands Fish and Wildlife Office directly (see **ADDRESSES**). The draft economic analysis prepared for this revised proposed critical habitat designation will replace the draft economic analysis that was prepared for the original proposal and announced in the **Federal Register** on January 4, 2007 (72 FR 321). We may exclude areas from the final rule based on information in the new draft economic analysis.

Peer Review

In accordance with our joint policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we are obtaining the expert opinions of at least three appropriate independent specialists regarding this revised proposed rule. The purpose of peer review is to ensure that our critical habitat designation is based on scientifically sound data, assumptions, and analyses. We have posted our proposed peer review plan on our Web site at *http://www.fws.gov/pacific/informationquality/index.htm*. We will send these peer reviewers copies of this revised proposed rule, immediately following publication in the **Federal Register**. We have invited these peer reviewers to comment during a public comment period on our specific assumptions and conclusions in this revised proposed designation of critical habitat.

We will consider all comments and information we receive during the comment period on this revised proposed rule during our preparation of a final determination. Accordingly, our final decision may differ from this proposal.

Public Hearings

The Act provides for one or more public hearings on this proposal, if we receive any requests for hearings. We must receive your request for a public hearing within 45 days after the date of this **Federal Register** publication. Send your request to the person named in **FOR FURTHER INFORMATION CONTACT**. We will schedule public hearings on this proposal, if any are requested, and announce the dates, times, and places of those hearings, as well as how to obtain reasonable accommodations, in the **Federal Register** and local newspapers at least 15 days before the first hearing.

Persons needing reasonable accommodations to attend and participate in the public hearings should contact the Pacific Islands Fish and Wildlife Office at 808–792–9400 as soon as possible. To allow sufficient time to process requests, please call no later than one week before the hearing date. Information regarding this revised proposal is available in alternative formats upon request.

Required Determinations

Regulatory Planning and Review

In accordance with Executive Order (E.O.) 12866, this document is a significant rule in that it may raise novel legal and policy issues, but we do not anticipate that it will have an annual effect on the economy of $100 million or more or affect the economy in a material way. To determine the economic consequences of designating the specific area as critical habitat, we are preparing a draft economic analysis of this proposed action, which will be available for public comment. This economic analysis also will be used to determine compliance with E.O. 12866, the Regulatory Flexibility Act, the Small Business Regulatory Enforcement Fairness Act, E.O. 12630, and E.O. 13211. Due to the tight timeline for publication in the **Federal Register**, the Office of Management and Budget (OMB) has not formally reviewed this rule.

Further, E.O. 12866 directs Federal agencies promulgating regulations to evaluate regulatory alternatives (OMB Circular A–4, September 17, 2003). Under Circular A–4, once an agency determines that the Federal regulatory action is appropriate, the agency must consider alternative regulatory approaches. Because the determination of critical habitat is a statutory requirement under the Act, we must evaluate alternative regulatory approaches, where feasible, when promulgating a designation of critical habitat.

In developing our designations of critical habitat, we consider economic impacts, impacts to national security, and other relevant impacts under section 4(b)(2) of the Act. Based on the discretion allowable under this provision, we may exclude any particular area from the designation of critical habitat providing that the benefits of such exclusion outweigh the benefits of specifying the area as critical habitat and that such exclusion would not result in the extinction of the species. As such, we believe that the evaluation of the inclusion or exclusion of particular areas, or a combination of both, constitutes our regulatory alternative analysis for designations.

We will announce the availability of the draft economic analysis in the **Federal Register** and in local newspapers so that it is available for public review and comments. The draft economic analysis will also be available on the Internet at *www.fws.gov/pacificislands* or by contacting the Pacific Islands Fish and Wildlife Office directly (see **ADDRESSES**).

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 et seq., as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency must publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. SBREFA amended RFA to require Federal agencies to provide a statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

At this time, we lack the available economic information necessary to provide an adequate factual basis for the required RFA finding. Therefore, we defer the RFA finding until completion of the draft economic analysis prepared under section 4(b)(2) of the Act and E.O. 12866. This draft economic analysis will provide the required factual basis for the RFA finding. Upon completion of the draft economic analysis, we will announce availability of the draft economic analysis of this revised proposed designation in the **Federal Register** and reopen the public comment period for this revised proposed designation. We will include with this announcement, as appropriate, an initial regulatory flexibility analysis or a certification that the rule will not have a significant economic impact on a substantial number of small entities accompanied by the factual basis for that determination. We have concluded that deferring the RFA finding until completion of the draft economic analysis is necessary to meet the purposes and requirements of the RFA. Deferring the RFA finding in this manner will ensure that we make a sufficiently informed determination based on adequate economic information and provide the necessary opportunity for public comment.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.), we make the following findings:

(a) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments, or the private sector, and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or [T]ribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and [T]ribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding,'' and the State, local, or Tribal governments ''lack authority'' to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; AFDC work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from

participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule will significantly or uniquely affect small governments. The lands being proposed for critical habitat designation are owned by the State of Hawaii, City and County of Honolulu, private citizens, and the National Park Service and U.S. Fish and Wildlife Service. None of these entities fit the definition of ''small governmental jurisdiction.'' Therefore, a Small Government Agency Plan is not required. However, as we conduct our economic analysis, we will further evaluate this issue and revise this assessment if appropriate.

Takings

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the 12 picture-wing flies in a takings implications assessment. The takings implications assessment concludes that this designation of critical habitat for the 12 picture-wing flies does not pose significant takings implications for lands within or affected by the proposed designation.

Federalism

In accordance with E.O. 13132 (Federalism), this revised proposed rule does not have significant Federalism effects. A Federalism assessment is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of, this revised proposed critical habitat designation with appropriate State resource agencies in Hawaii. The designation of critical habitat in areas currently occupied by 12 species of picture-wing flies imposes no additional restrictions to those currently in place and, therefore, has little incremental impact on State and local governments and their activities. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the primary constituent elements of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist local governments in longπrange planning (rather than having them wait for case-by-case section 7 consultations to occur).

Civil Justice Reform

This regulation meets the applicable standards set forth in sections 3(a) and 3(b)(2) of Executive Order # 12988 (Civil Justice Reform). We have issued this revised proposed critical habitat designation in accordance with the provisions of the Act. This proposed rule uses standard property descriptions and identifies the primary constituent elements within the designated areas to assist the public in understanding the habitat needs of the 12 species of Hawaiian picture-wing flies.

Paperwork Reduction Act of 1995

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act

It is our position that, outside the jurisdiction of the United States Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses as defined by NEPA (42 U.S.C. 4321 et seq.) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the Circuit Court of the United States for the Ninth Circuit (*Douglas County* v. *Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Clarity of the Rule

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

(a) Be logically organized;

(b) Use the active voice to address readers directly;

(c) Use clear language rather than jargon;

(d) Be divided into short sections and sentences; and

(e) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in the **ADDRESSES** section. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, Government-to-Government Relations with Native American Tribal Governments (59 FR 22951), E.O. 13175, and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We have determined that there are no Tribal lands occupied at the time of listing that contain the features essential for the conservation, and no Tribal lands that are essential for the conservation, of the 12 picture-wing flies within the State of Hawaii. Therefore, we have not proposed designation of critical habitat for any of these species on Tribal lands.

Energy Supply, Distribution, or Use

On May 18, 2001, the President issued an Executive Order (E.O. 13211; Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. While this revised proposed rule to designate critical habitat for 12 species of Hawaiian picture-wing flies is a significant regulatory action under E.O. 12866 in that it may raise novel legal and policy issues, we do not expect it to significantly affect energy supplies, distribution, or use because these areas are not presently used for energy production and we are unaware of any future plans in this regard. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required. However, we will further evaluate this issue as we conduct our economic analysis, and review and revise this assessment as warranted.

References Cited

A complete list of all references cited in this rule is available upon request from the Field Supervisor, Pacific Islands Fish and Wildlife Office (see **ADDRESSES**).

Author(s)

The primary author of this document is staff of the Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

2. In § 17.11(h), revise the entries for ''Fly, Hawaiian picture-wing'' (*Drosophila aglaia*), ''Fly, Hawaiian picture-wing'' (*Drosophila differens*), ''Fly, Hawaiian picture-wing'' (*Drosophila hemipeza*), ''Fly, Hawaiian picture-wing'' (*Drosophila heteroneura*), ''Fly, Hawaiian picture-wing'' (*Drosophila montgomeryi*), ''Fly, Hawaiian picture-wing'' (*Drosophila mulli*), ''Fly, Hawaiian picture-wing'' (*Drosophila musaphilia*), ''Fly, Hawaiian picture-wing'' (*Drosophila neoclavisetae*), ''Fly, Hawaiian picture-wing'' (*Drosophila obatai*), ''Fly, Hawaiian picture-wing'' (*Drosophila ochrobasis*), ''Fly, Hawaiian picture-wing'' (*Drosophila substenoptera*), and ''Fly, Hawaiian picture-wing'' (*Drosophila tarphytrichia*), under INSECTS in the List of Endangered and Threatened Wildlife, to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
INSECTS							
*	*	*	*	*	*		*
Fly, Hawaiian picture-wing.	*Drosophila aglaia*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila differens*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila hemipeza*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila heteroneura.*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila montgomeryi.*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila mulli*	U.S.A. (HI)	NA	T	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila musaphilia.*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila neoclavisetae.*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila obatai*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila ochrobasis.*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila substenoptera.*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
Fly, Hawaiian picture-wing.	*Drosophila tarphytrichia.*	U.S.A. (HI)	NA	E	756	17.95(i)	NA
*	*	*	*	*	*		*

3. In § 17.95, amend paragraph (i) by adding entries for ''Hawaiian picture-wing fly (*Drosophila aglaia*),'' ''Hawaiian picture-wing fly (*Drosophila differens*),'' ''Hawaiian picture-wing fly (*Drosophila hemipeza*),'' ''Hawaiian picture-wing fly (*Drosophila heteroneura*),'' ''Hawaiian picture-wing fly (*Drosophila montgomeryi*),''

''Hawaiian picture-wing fly (*Drosophila mulli*),'' ''Hawaiian picture-wing fly (*Drosophila musaphilia*),'' ''Hawaiian picture-wing fly (*Drosophila neoclavisetae*),'' ''Hawaiian picture-wing fly (*Drosophila obatai*),'' ''Hawaiian picture-wing fly (*Drosophila ochrobasis*),'' ''Hawaiian picture-wing fly (*Drosophila substenoptera*),'' and ''Hawaiian picture-wing fly (*Drosophila tarphytrichia*),'' in the same alphabetical order in which these species appear in that table at § 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(i) *Insects.*

* * * * *

Hawaiian picture-wing fly (*Drosophila aglaia*)

(1) Critical habitat units are depicted for County of Honolulu, island of Oahu, Hawaii, on the maps below.

(2) The primary constituent elements of critical habitat for *Drosophila aglaia* are:

(i) Dry to mesic, lowland, *Diospyros* sp., ohia and koa forest between the elevations of 1,400–2,900 ft (425–885 m); and

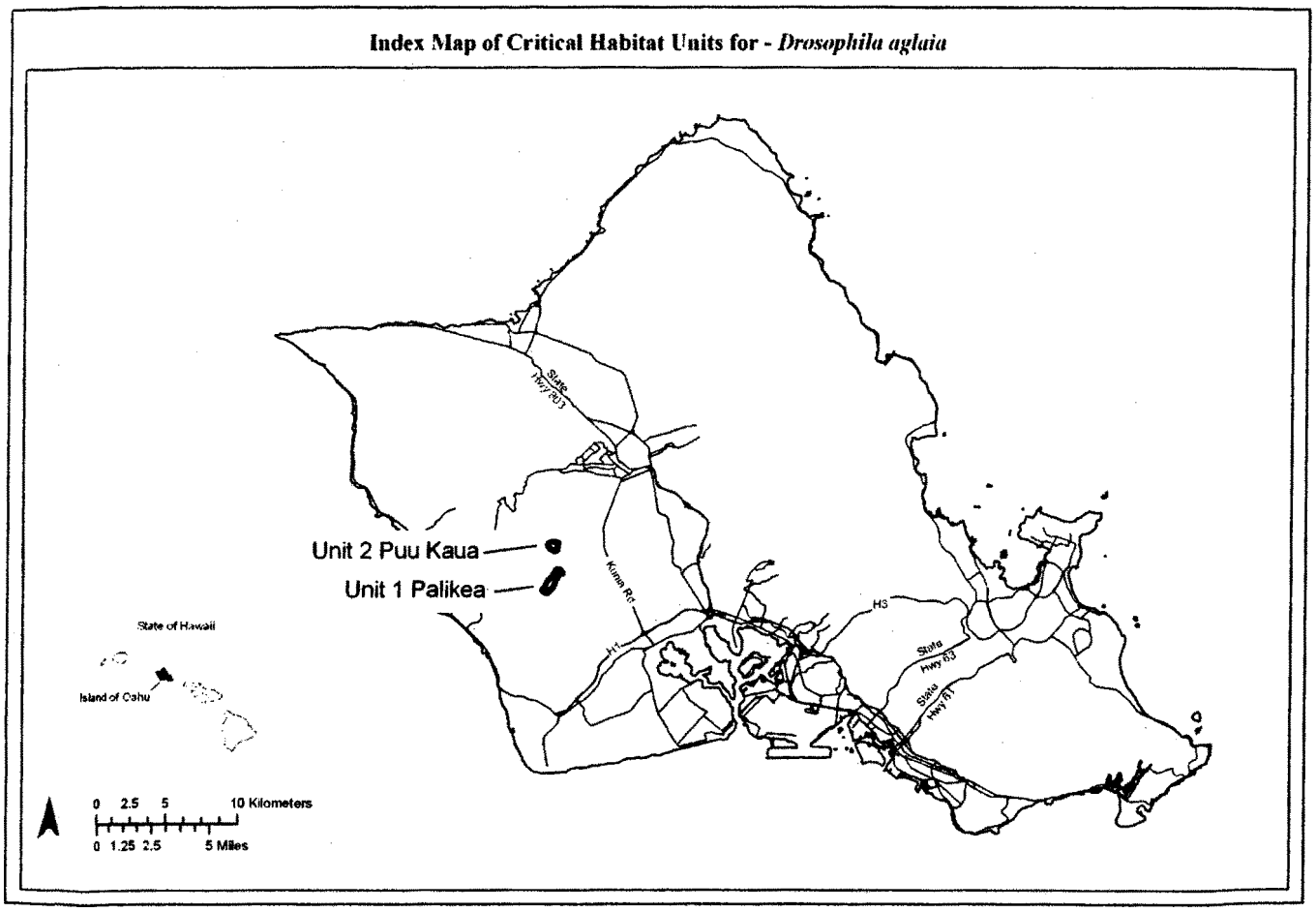
(ii) The larval host plant *Urera glabra.*

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) Note: Index map of critical habitat units for *Drosophila aglaia* follows:

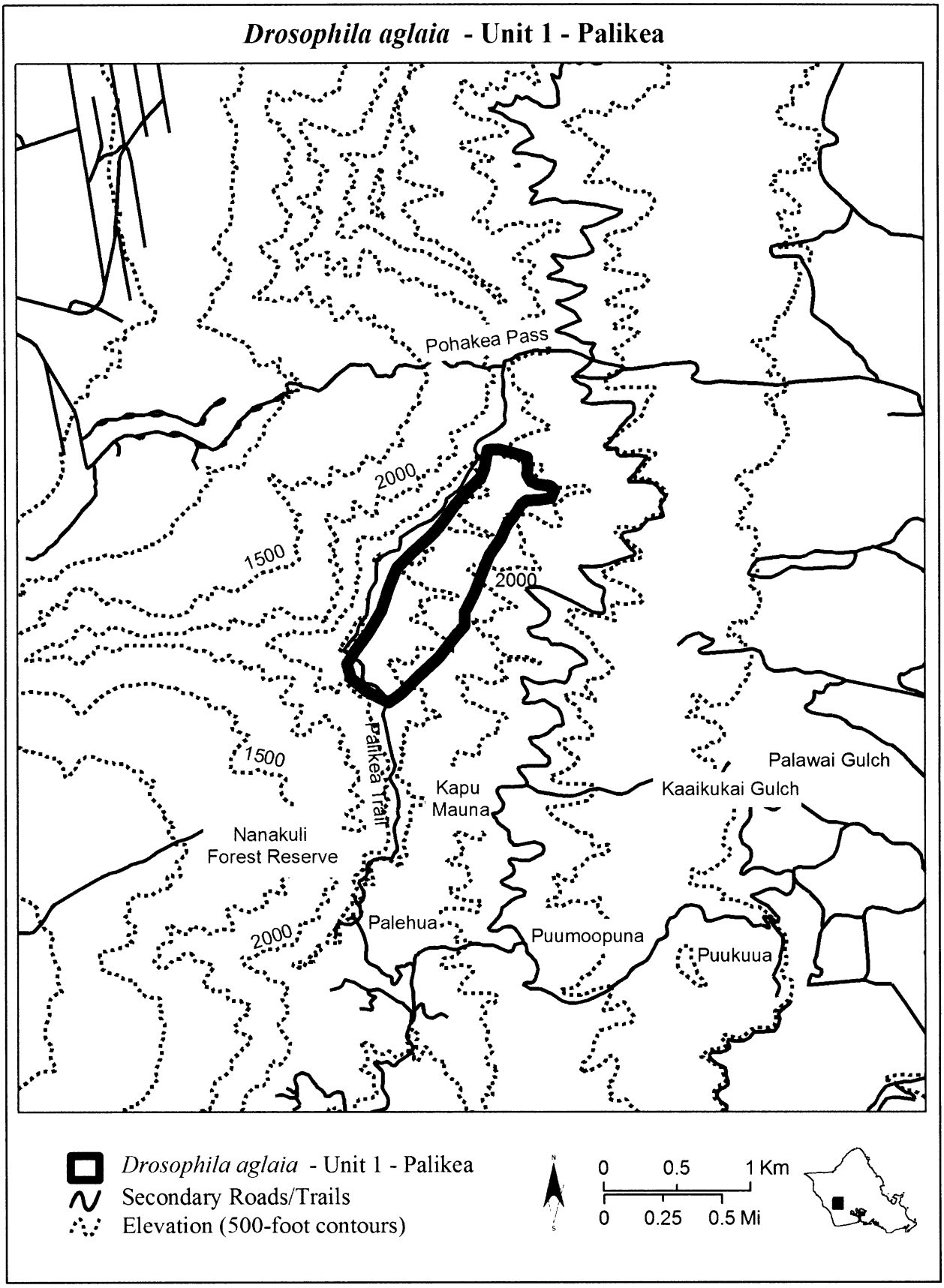
BILLING CODE 4310–55–P



(6) *Drosophila aglaia*—Unit 1—Palikea, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 593529, 2367854; 593448, 2367801; 593302, 2367874; 593242, 2367927; 593193, 2367967; 593165, 2368065; 593217, 2368150; 593314, 2368283; 593399, 2368425; 593448, 2368578; 593505, 2368716; 593622, 2368833; 593703, 2368906; 593764, 2368963; 593832, 2369044; 593901, 2369145; 594002, 2369262; 594079, 2369331; 594104, 2369396; 594120, 2369485; 594124, 2369521; 594148, 2369525; 594213, 2369525; 594310, 2369497; 594395, 2369473; 594399, 2369392; 594396, 2369356; 594417, 2369313; 594461, 2369290; 594551, 2369278; 594579, 2369250; 594559, 2369197; 594472, 2369183; 594391, 2369179; 594354, 2369153; 594302, 2369072; 594257, 2369015; 594213, 2368914; 594136, 2368809; 594083, 2368672; 594035, 2368550; 593966, 2368417; 593966, 2368324; 593909, 2368259; 593792, 2368105; 593675, 2368000.

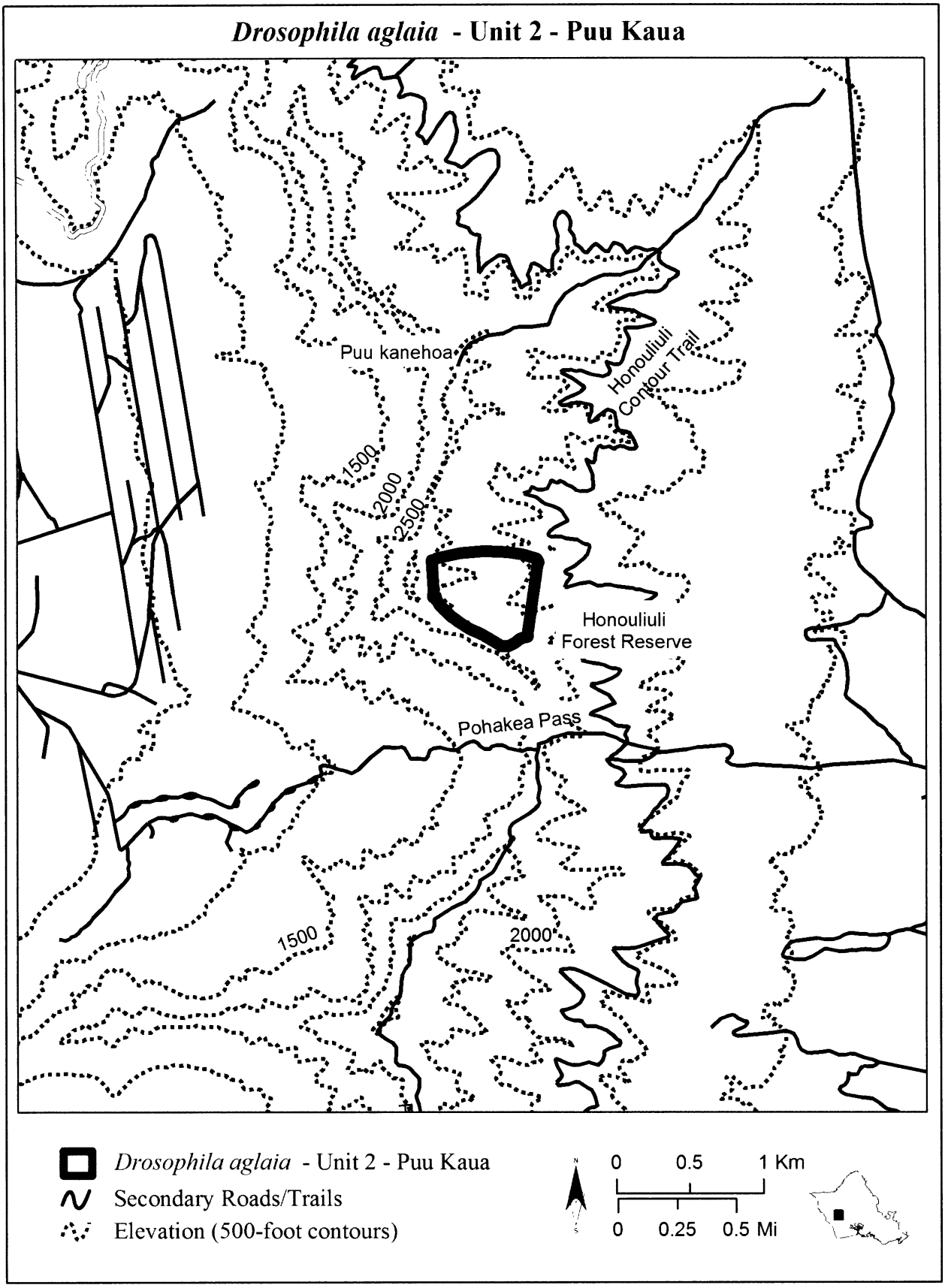
(ii) Note: Map of *Drosophila aglaia*—Unit 1—Palikea follows:


Drosophila aglaia - Unit 1 - Palikea
Pohakea Pass
2000
1500
2000
1500
Palikea Trail
Kapu
Mauna
Palawai Gulch
Kaaikukai Gulch
Nanakuli
Forest Reserve
Palehua
2000
Puumoopuna
Puukuua
Drosophila aglaia - Unit 1 - Palikea
Secondary Roads/Trails
Elevation (500-foot contours)
N
S
0 0.5 1 Km
0 0.25 0.5 Mi

(7) *Drosophila aglaia*—Unit 2—Puu Kaua, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 594166, 2370854; 594166, 2370853; 594164, 2370854; 594122, 2370843; 594090, 2370815; 594040, 2370789; 593996, 2370789; 593930, 2370827; 593852, 2370875; 593778, 2370907; 593716, 2370947; 593642, 2370999; 593602, 2371041; 593574, 2371067; 593558, 2371095; 593539, 2371118; 593531, 2371121; 593534, 2371173; 593519, 2371375; 593533, 2371375; 593552, 2371390; 593628, 2371404; 593716, 2371426; 593794, 2371431; 593876, 2371437; 593974, 2371435; 594036, 2371431; 594138, 2371415; 594190, 2371399; 594232, 2371385; 594246, 2371359; 594239, 2371354; 594170, 2370879; 594172, 2370877; 594170, 2370855.

(ii) Note: Map of *Drosophila aglaia*—Unit 2—Puu Kaua follows:


Drosophila aglaia - Unit 2 - Puu Kaua
Puu kanehoa
Honouliuli Contour Trail
1500
2000
2500
Honouliuli Forest Reserve
Pohakea Pass
1500
2000
Drosophila aglaia - Unit 2 - Puu Kaua
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

BILLING CODE 4310–55–C

Hawaiian picture-wing fly (*Drosophila differens*)

(1) Critical habitat is depicted for County of Maui, island of Molokai, Hawaii, on the map below.

(2) The primary constituent elements of critical habitat for *Drosophila differens* are:

(i) Wet, montane, ohia forest between the elevations of 3,650–4,500 ft (1,115–1,370 m); and

(ii) The larval host plants *Clermontia arborescens* ssp. *waihiae, C. granidiflora* ssp. *munroi, C. oblongifolia* ssp. *brevipes, C. kakeana,* and *C. pallida.*

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

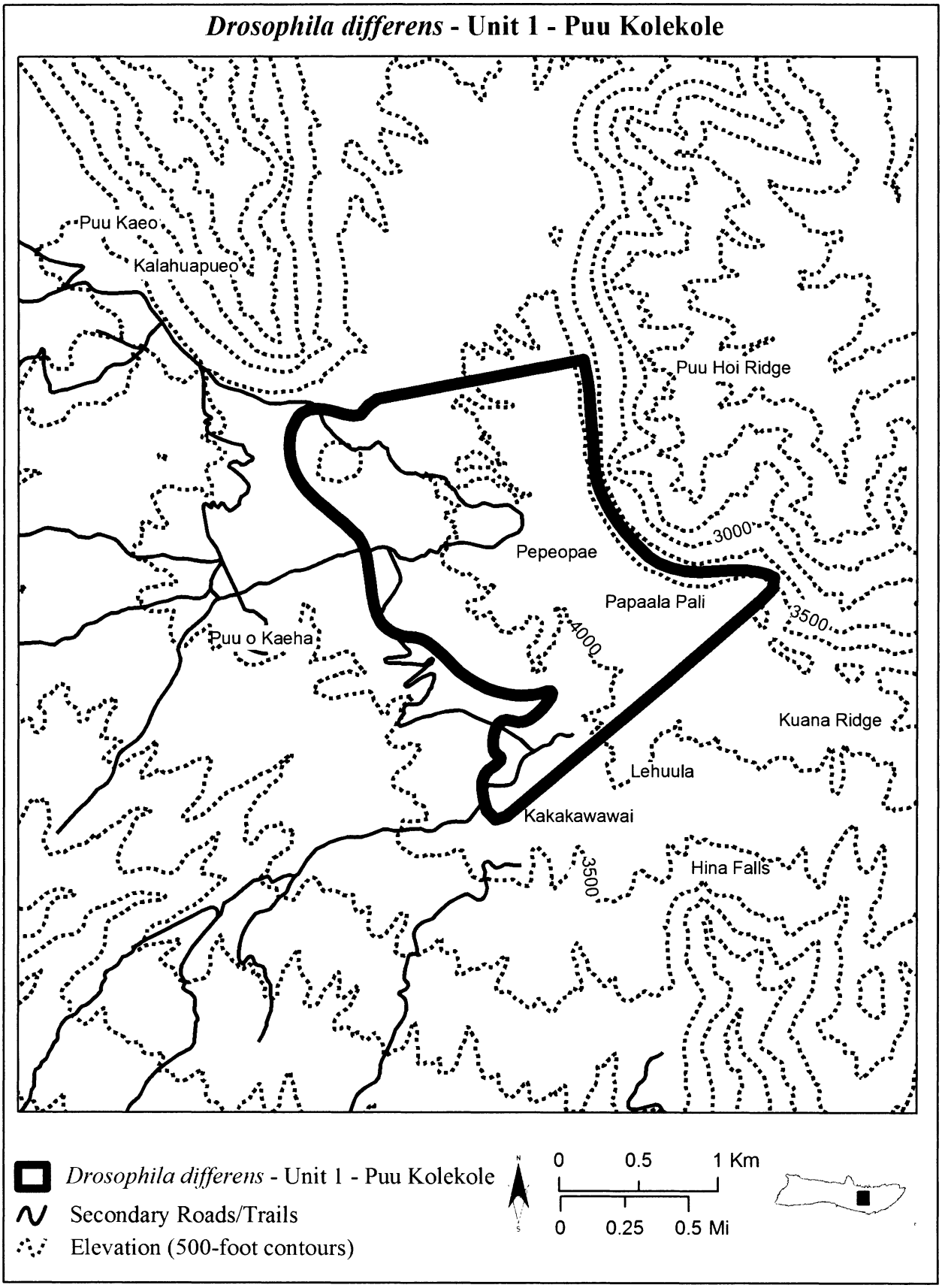
(4) Critical habitat map unit. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) *Drosophila differens*—Unit 1—Puu Kolekole, Maui County, island of Molokai, Hawaii.

(i) Land bounded by the following coordinates: 718527, 2337536; 718533, 2337451; 718538, 2337370; 718543, 2337298; 718547, 2337236; 718551, 2337182; 718555, 2337138; 718560, 2337098; 718571, 2337055; 718586, 2337010; 718607, 2336962; 718632, 2336912; 718662, 2336860; 718698, 2336807; 718739, 2336754; 718784, 2336700; 718835, 2336646; 718892, 2336593; 718958, 2336551; 719034, 2336520; 719119, 2336502; 719215, 2336497; 719320, 2336503; 719420, 2336509; 719506, 2336508; 719579, 2336500; 719639, 2336484; 719685, 2336462; 719675, 2336394; 719613, 2336327; 718980, 2335781; 718332, 2335236; 718002, 2334953; 717930, 2334932; 717877, 2334988; 717855, 2335060; 717846, 2335123; 717848, 2335175; 717862, 2335217; 717888, 2335249; 717921, 2335272; 717946, 2335291; 717961, 2335308; 717965, 2335322; 717958, 2335333; 717942, 2335342; 717928, 2335356; 717919, 2335377; 717915, 2335404; 717916, 2335438; 717923, 2335478; 717935, 2335515; 717952, 2335542; 717974, 2335558; 718001, 2335564; 718034, 2335559; 718070, 2335550; 718107, 2335553; 718144, 2335567; 718182, 2335593; 718221, 2335630; 718257, 2335675; 718280, 2335710; 718286, 2335733; 718277, 2335745; 718253, 2335744; 718213, 2335731; 718166, 2335721; 718115, 2335717; 718060, 2335719; 718001, 2335728; 717937, 2335742; 717873, 2335764; 717812, 2335793; 717753, 2335829; 717697, 2335873; 717643, 2335924; 717591, 2335977; 717543, 2336020; 717499, 2336052; 717458, 2336073; 717420, 2336083; 717385, 2336085; 717351, 2336089; 717319, 2336098; 717288, 2336110; 717258, 2336127; 717230, 2336148; 717204, 2336180; 717183, 2336223; 717165, 2336280; 717151, 2336348; 717140, 2336429; 717130, 2336510; 717118, 2336579; 717103, 2336636; 717085, 2336680; 717065, 2336713; 717041, 2336739; 717009, 2336769; 716968, 2336806; 716919, 2336847; 716862, 2336894; 716800, 2336946; 716745, 2337000; 716702, 2337055; 716669, 2337112; 716647, 2337171; 716635, 2337231; 716632, 2337289; 716634, 2337341; 716644, 2337388; 716660, 2337430; 716683, 2337468; 716713, 2337497; 716751, 2337516; 716797, 2337523; 716850, 2337520; 716912, 2337507; 716976, 2337488; 717031, 2337481; 717077, 2337486; 717126, 2337542; 717183, 2337585; 718403, 2337817; 718484, 2337833; 718487, 2337824; 718499, 2337760; 718510, 2337691; 718519, 2337616.

(ii) Note: Map of *Drosophila differens*—Unit 1—Puu Kolekole follows:

BILLING CODE 4310–55–P


Drosophila differens - Unit 1 - Puu Kolekole
Puu Kaeo
Kalahuapueo
Puu Hoi Ridge
3000
Pepeopae
Papaala Pali
3500
4000
Puu o Kaeha
Kuana Ridge
Lehuula
Kakakawawai
3500
Hina Falls
Drosophila differens - Unit 1 - Puu Kolekole
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

Hawaiian picture-wing fly (*Drosophila hemipeza*)

(1) Critical habitat units are depicted for County of Honolulu, island of Oahu, Hawaii, on the maps below.

(2) The primary constituent elements of critical habitat for *Drosophila hemipeza* are:

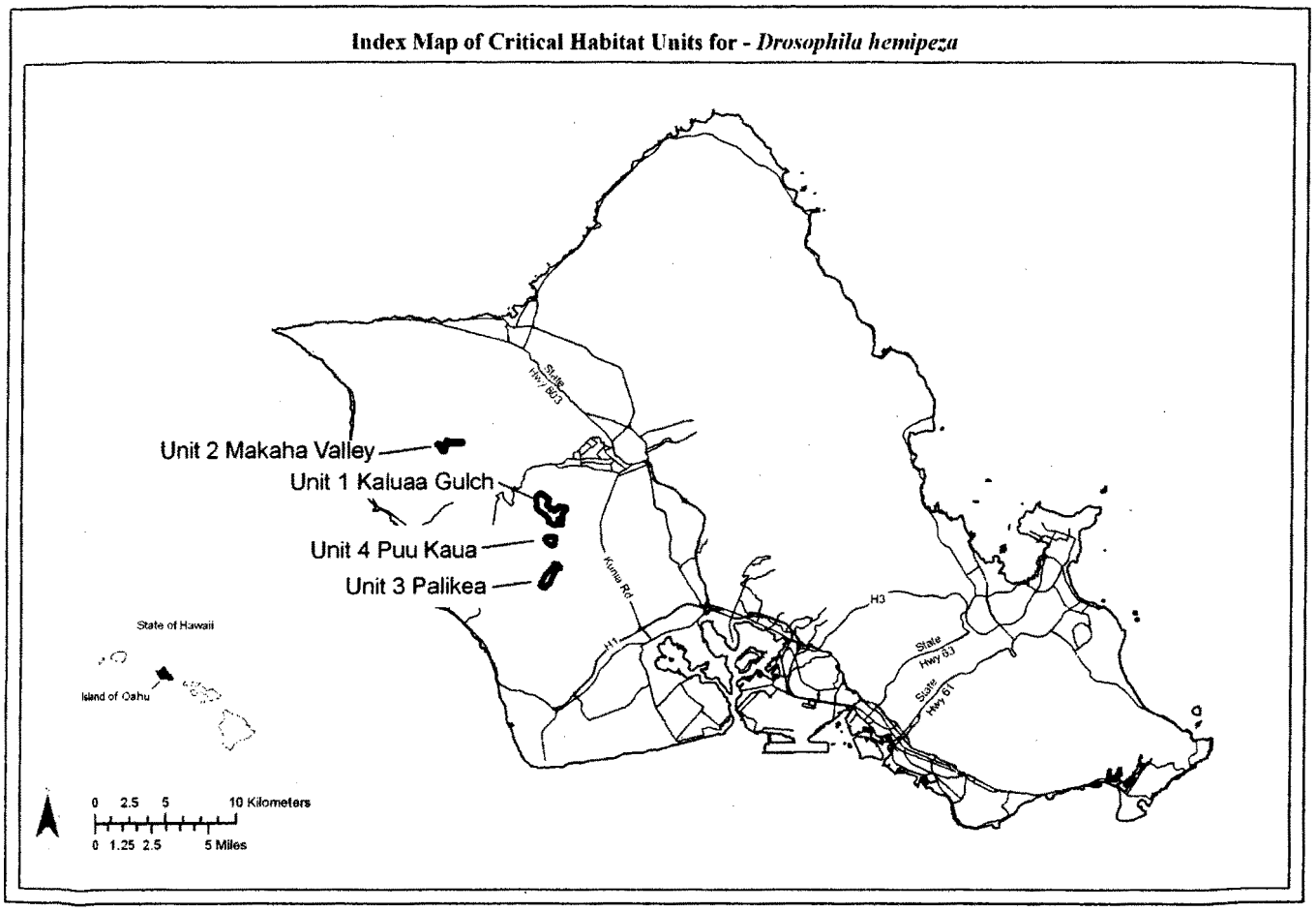
(i) Dry to mesic, lowland, ohia and koa forest between the elevations of 1,500–2,900 ft (460–885 m); and

(ii) The larval host plants *Cyanea angustifolia, C. calycina, C. grimesiana* ssp. *grimesiana, C. grimesiana* ssp. *obatae, C. membranacea, C. pinnatifida, C. superba* ssp. *superba, Lobelia hypoleuca, L. niihauensis, L. yuccoides,* and *Urera kaalae.*

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) Note: Index map of critical habitat units for *Drosophila hemipeza* follows:



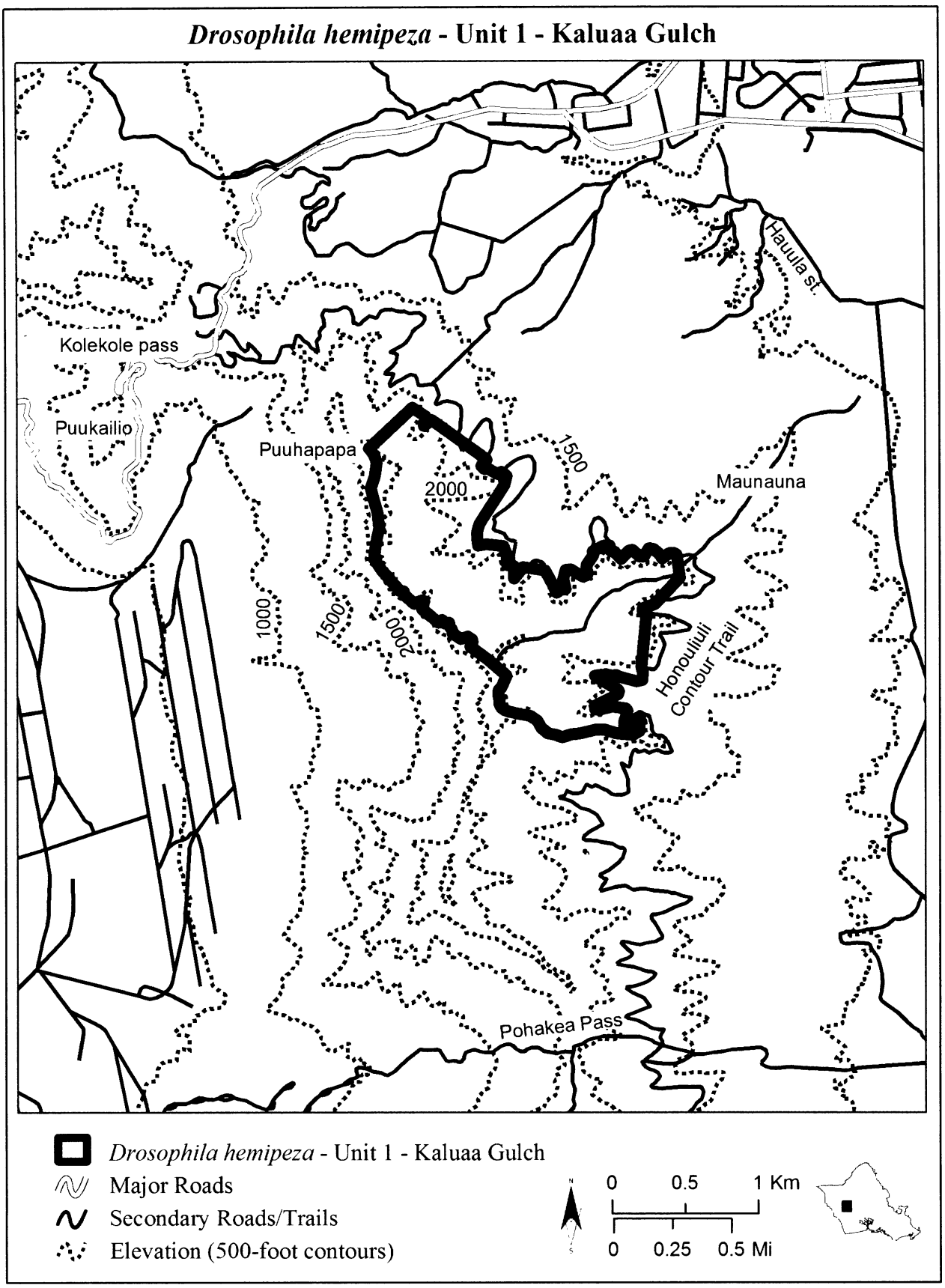
(6) *Drosophila hemipeza*—Unit 1—Kaluaa Gulch, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 593240, 2374436; 593231, 2374371; 593281, 2374410; 593315, 2374385; 593612, 2374173; 593656, 2374138; 593621, 2374096; 593641, 2374077; 593676, 2374072; 593703, 2374057; 593734, 2374039; 593758, 2374058; 593793, 2374029; 593779, 2373964; 593731, 2373894; 593660, 2373784; 593609, 2373702; 593592, 2373648; 593592, 2373594; 593598, 2373553; 593657, 2373561; 593770, 2373549; 593792, 2373496; 593797, 2373417; 593842, 2373411; 593842, 2373326; 593905, 2373404; 594053, 2373383; 594103, 2373292; 594134, 2373228; 594156, 2373250; 594194, 2373256; 594178, 2373323; 594196, 2373386; 594229, 2373390; 594312, 2373340; 594341, 2373350; 594339, 2373421; 594383, 2373487; 594381, 2373513; 594460, 2373552; 594496, 2373553; 594497, 2373518; 594526, 2373509; 594572, 2373460; 594632, 2373519; 594649, 2373523; 594699, 2373475; 594728, 2373476; 594762, 2373532; 594791, 2373529; 594828, 2373501; 594852, 2373465; 594903, 2373501; 594933, 2373500; 594952, 2373489; 594974, 2373334; 594800, 2373150; 594718, 2373120; 594718, 2373102; 594744, 2373091; 594710, 2372721; 594720, 2372686; 594716, 2372633; 594678, 2372623; 594566, 2372651; 594536, 2372666; 594506, 2372663; 594467, 2372672; 594395, 2372663; 594406, 2372650; 594546, 2372567; 594558, 2372553; 594551, 2372535; 594389, 2372452; 594395, 2372434; 594415, 2372428; 594511, 2372449; 594603, 2372437; 594614, 2372421; 594607, 2372385; 594593, 2372353; 594591, 2372317; 594618, 2372322; 594661, 2372357; 594700, 2372384; 594696, 2372334; 594697, 2372333; 594697, 2372283; 594652, 2372257; 594541, 2372266; 594454, 2372294; 594400, 2372294; 594293, 2372267; 594231, 2372261; 594168, 2372241; 594126, 2372258; 594075, 2372267; 594030, 2372303; 593999,

2372354; 593948, 2372388; 593889, 2372397; 593812, 2372413; 593781, 2372425; 593756, 2372442; 593742, 2372467; 593742, 2372490; 593736, 2372521; 593736, 2372560; 593757, 2372587; 593790, 2372662; 593663, 2372772; 593543, 2372859; 593558, 2372894; 593555, 2372910; 593526, 2372928; 593476, 2372912; 593422, 2372953; 593420, 2372976; 593403, 2372997; 593400, 2373025; 593373, 2373016; 593352, 2373044; 593328, 2373025; 593215, 2373118; 593230, 2373171; 593214, 2373176; 593163, 2373154; 593095, 2373213; 593091, 2373238; 593064, 2373243; 593019, 2373295; 592937, 2373388; 592889, 2373462; 592897, 2373535; 592908, 2373597; 592923, 2373668; 592914, 2373772; 592889, 2373866; 592868, 2373941; 592867, 2373950; 592894, 2374029; 592908, 2374120; 592894, 2374162; 592860, 2374213; 592854, 2374216; 593151, 2374494.

(ii) Note: Map of *Drosophila hemipeza*—Unit 1—Kaluaa Gulch follows:

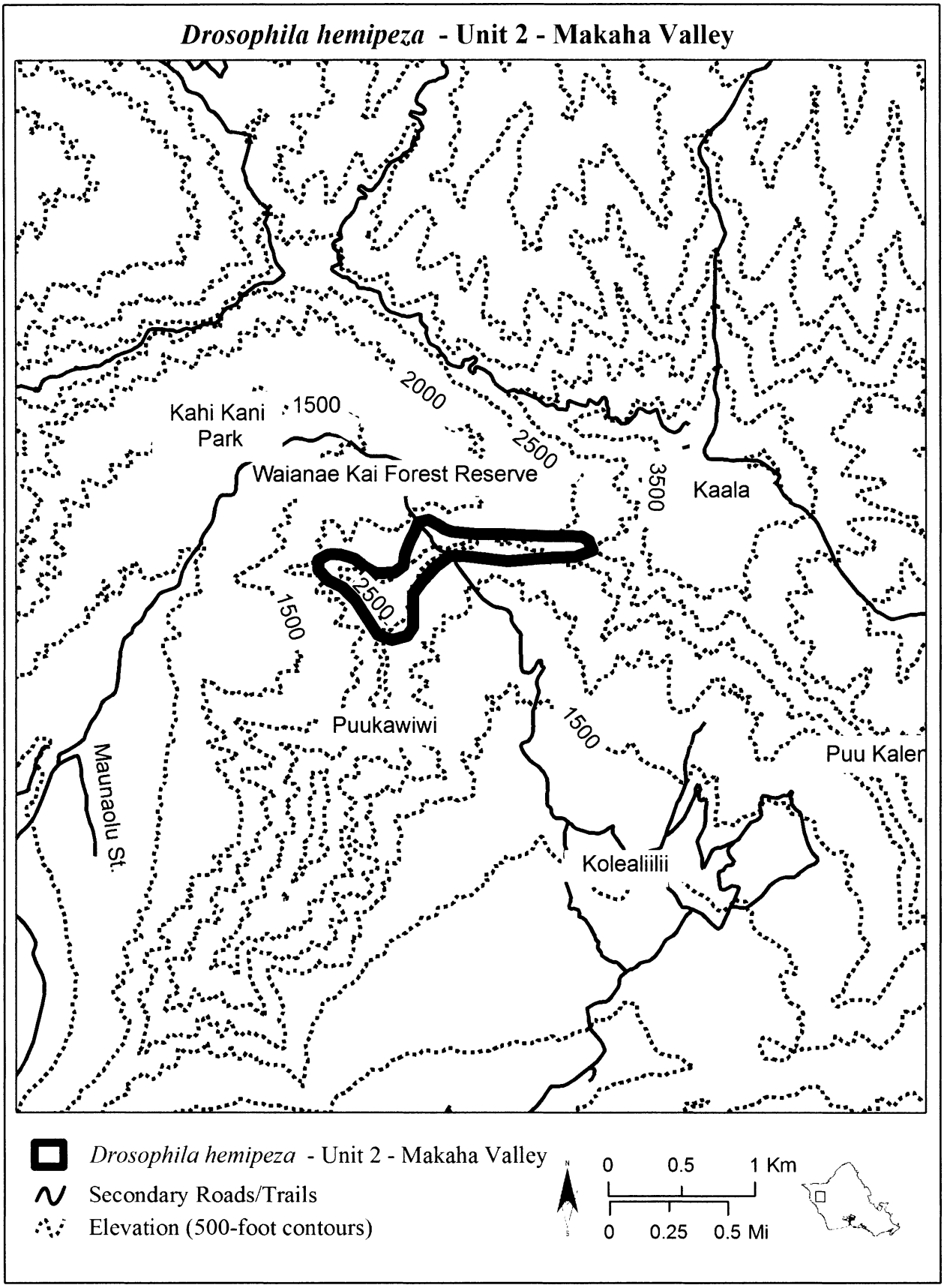
BILLING CODE 4310–55–P


Drosophila hemipeza - Unit 1 - Kaluaa Gulch
Kolekole pass
Puukailio
Puuhapapa
2000
1500
Maunauna
Hauula st.
1000
1500
2000
Honouliuli Contour Trail
Pohakea Pass
Drosophila hemipeza - Unit 1 - Kaluaa Gulch
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(7) *Drosophila hemipeza*—Unit 2—Makaha Valley, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 586712, 2378108; 586877, 2378091; 587049, 2378091; 587173, 2378087; 587333, 2378079; 587506, 2378079; 587592, 2378075; 587641, 2378046; 587641, 2378038; 587666, 2377980; 587543, 2377935; 587399, 2377931; 587243, 2377919; 587090, 2377906; 586794, 2377943; 586696, 2377943; 586597, 2377869; 586507, 2377767; 586449, 2377684; 586449, 2377458; 586408, 2377397; 586305, 2377368; 586206, 2377405; 586054, 2377643; 585968, 2377726; 585869, 2377775; 585803, 2377849; 585803, 2377915; 585869, 2377952; 585894, 2377956; 585956, 2377952; 586050, 2377923; 586120, 2377869; 586194, 2377824; 586317, 2377828; 586383, 2377878; 586391, 2377956; 586420, 2378034; 586461, 2378116; 586482, 2378174; 586552, 2378190; 586630, 2378149; 586655, 2378128.

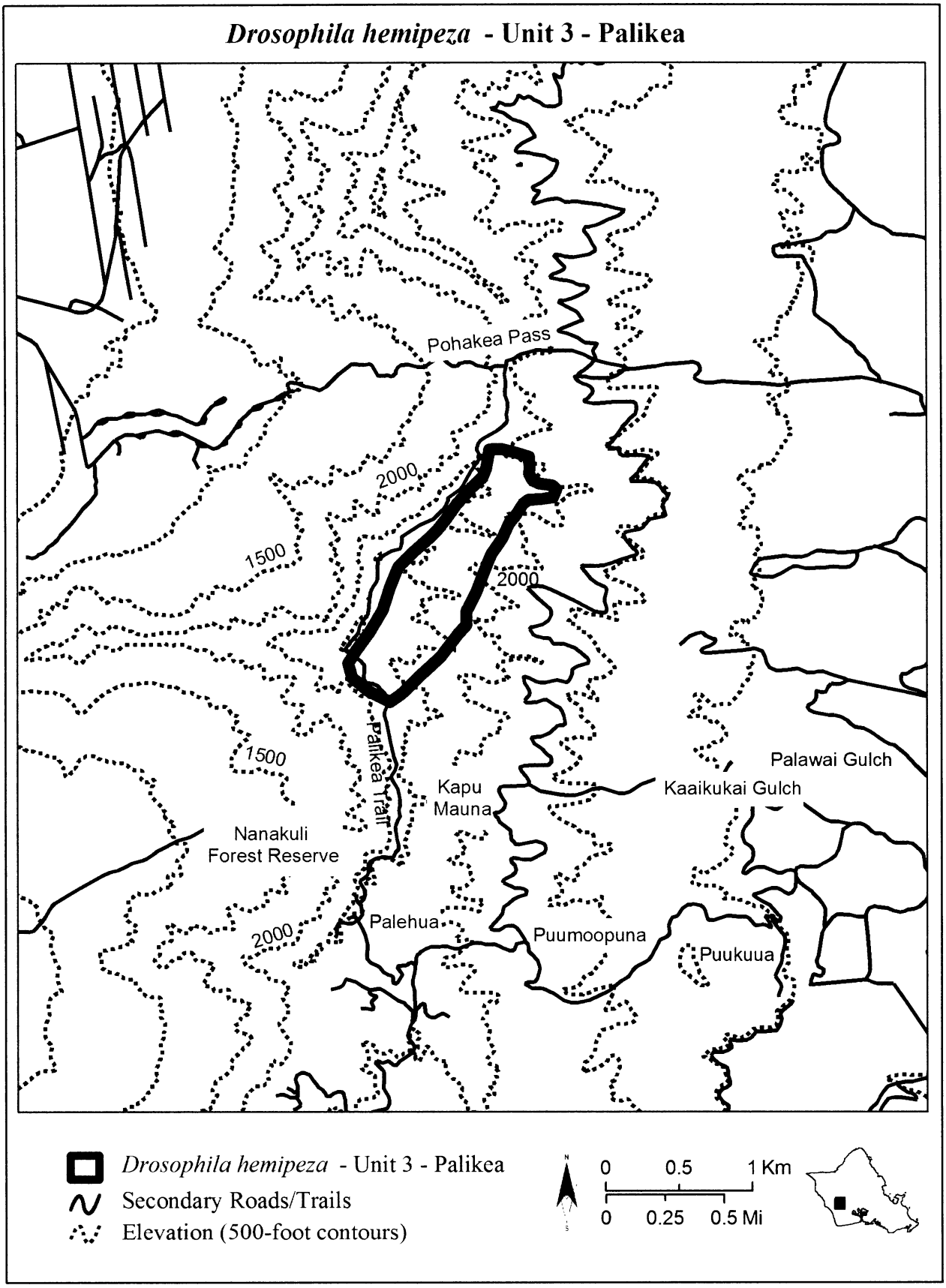
(ii) Note: Map of *Drosophila hemipeza*—Unit 2—Makaha Valley follows:


Drosophila hemipeza - Unit 2 - Makaha Valley
Kahi Kani Park
1500
2000
2500
3500
Waianae Kai Forest Reserve
Kaala
2500
1500
Puukawiwi
1500
Puu Kaler
Maunaolu St.
Kolealiilii
Drosophila hemipeza - Unit 2 - Makaha Valley
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(8) *Drosophila hemipeza*—Unit 3—Palikea, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 593529, 2367854; 593448, 2367801; 593302, 2367874; 593242, 2367927; 593193, 2367967; 593165, 2368065; 593217, 2368150; 593314, 2368283; 593399, 2368425; 593448, 2368578; 593505, 2368716; 593622, 2368833; 593703, 2368906; 593764, 2368963; 593832, 2369044; 593901, 2369145; 594002, 2369262; 594079, 2369331; 594104, 2369396; 594120, 2369485; 594124, 2369521; 594148, 2369525; 594213, 2369525; 594310, 2369497; 594395, 2369473; 594399, 2369392; 594396, 2369356; 594417, 2369313; 594461, 2369290; 594551, 2369278; 594579, 2369250; 594559, 2369197; 594472, 2369183; 594391, 2369179; 594354, 2369153; 594302, 2369072; 594257, 2369015; 594213, 2368914; 594136, 2368809; 594083, 2368672; 594035, 2368550; 593966, 2368417; 593966, 2368324; 593909, 2368259; 593792, 2368105; 593675, 2368000.

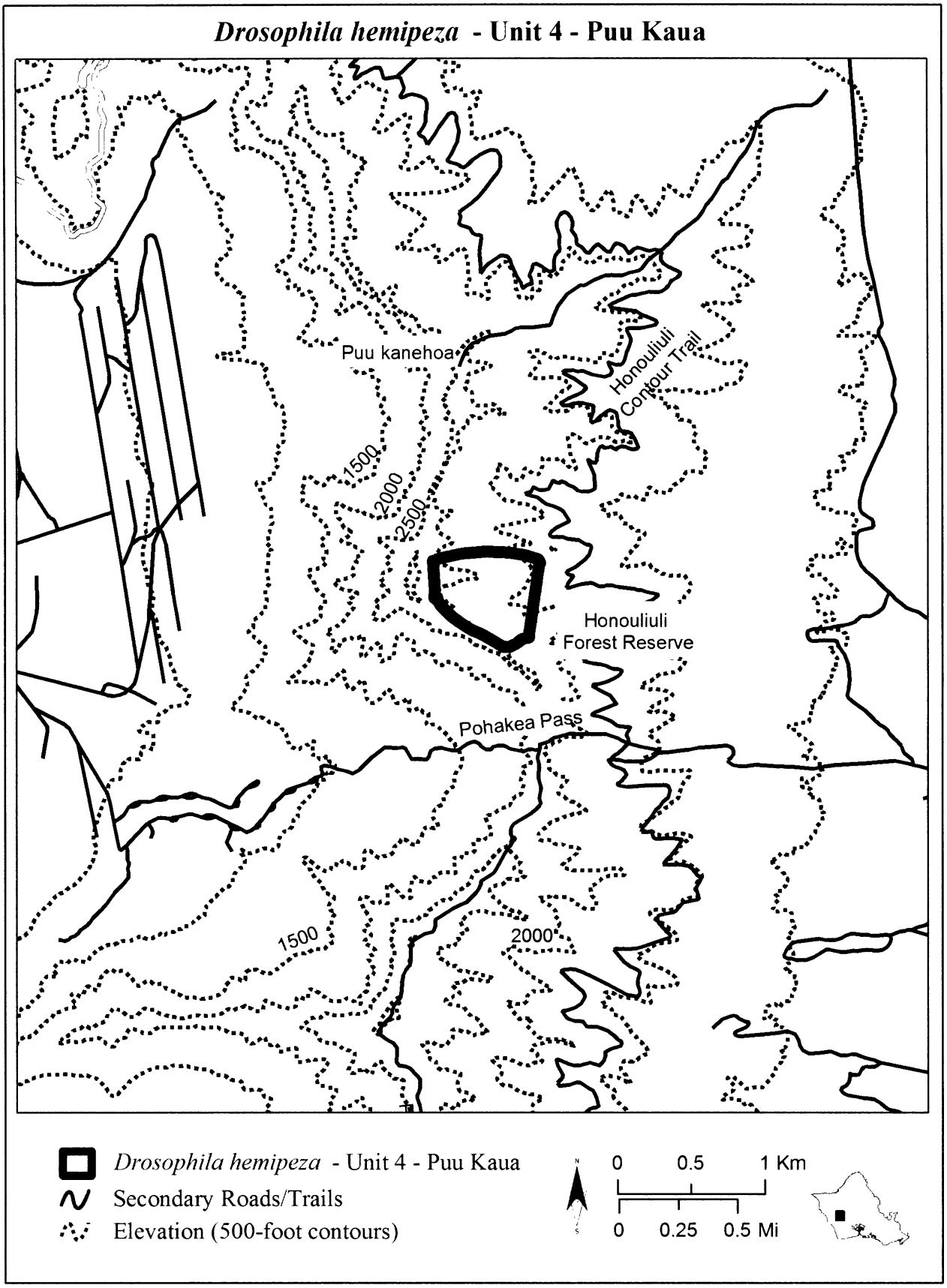
(ii) Note: Map of *Drosophila hemipeza*—Unit 3—Palikea follows:


Drosophila hemipeza - Unit 3 - Palikea
Pohakea Pass
2000
1500
2000
1500
Palikea Trail
Kapu
Mauna
Palawai Gulch
Kaaikukai Gulch
Nanakuli
Forest Reserve
Palehua
2000
Puumoopuna
Puukuua
Drosophila hemipeza - Unit 3 - Palikea
Secondary Roads/Trails
Elevation (500-foot contours)
N
S
0
0.5
1 Km
0
0.25
0.5 Mi

(9) *Drosophila hemipeza*—Unit 4—Puu Kaua, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 594166, 2370854; 594166, 2370853; 594164, 2370854; 594122, 2370843; 594090, 2370815; 594040, 2370789; 593996, 2370789; 593930, 2370827; 593852, 2370875; 593778, 2370907; 593716, 2370947; 593642, 2370999; 593602, 2371041; 593574, 2371067; 593558, 2371095; 593539, 2371118; 593531, 2371121; 593534, 2371173; 593519, 2371375; 593533, 2371375; 593552, 2371390; 593628, 2371404; 593716, 2371426; 593794, 2371431; 593876, 2371437; 593974, 2371435; 594036, 2371431; 594138, 2371415; 594190, 2371399; 594232, 2371385; 594246, 2371359; 594239, 2371354; 594170, 2370879; 594172, 2370877; 594170, 2370855.

(ii) Note: Map of *Drosophila hemipeza*—Unit 4—Puu Kaua follows:


Drosophila hemipeza - Unit 4 - Puu Kaua
Puu kanehoa
Honouliuli Contour Trail
1500
2000
2500
Honouliuli Forest Reserve
Pohakea Pass
1500
2000
Drosophila hemipeza - Unit 4 - Puu Kaua
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

Hawaiian picture-wing fly (*Drosophila heteroneura*)

(1) Critical habitat units are depicted for County of Hawaii, island of Hawaii, Hawaii, on the maps below.

(2) The primary constituent elements of critical habitat for *Drosophila heteroneura* are:

(i) Mesic to wet, montane, ohia and koa forest between the elevations of 3,000—6,000 ft (915–1,830 m); and

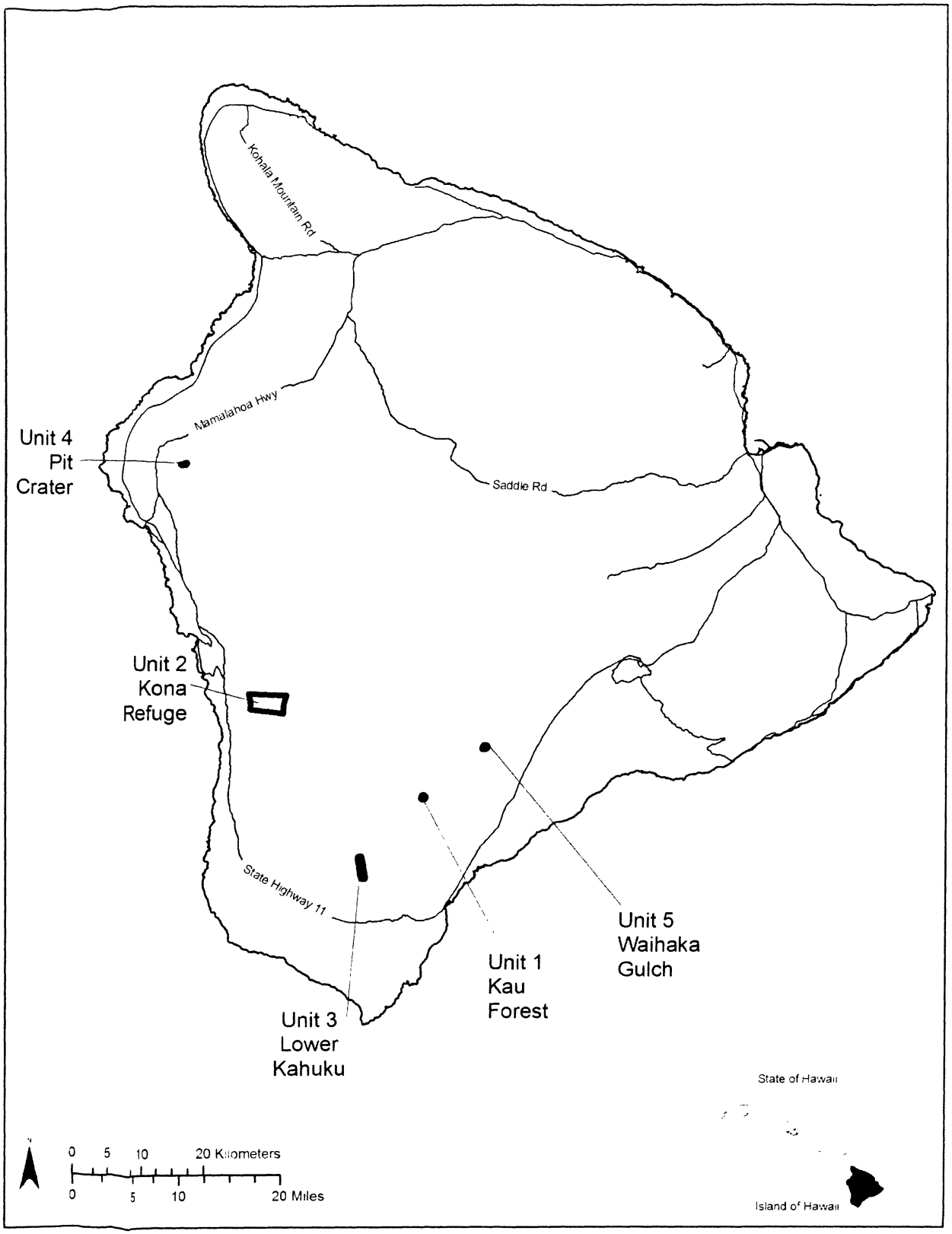
(ii) The larval host plants *Cheirodendron trigynum* ssp. *trigynum, Clermontia clermontioides, C. clermontioides* ssp. *rockiana, C. hawaiiensis, C. kohalae, C. lindseyana, C. montis-loa, C. parviflora, C. peleana, C. pyrularia,* and *Delissea parviflora.*

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) Note: Index map of critical habitat units for *Drosophila heteroneura* follows:

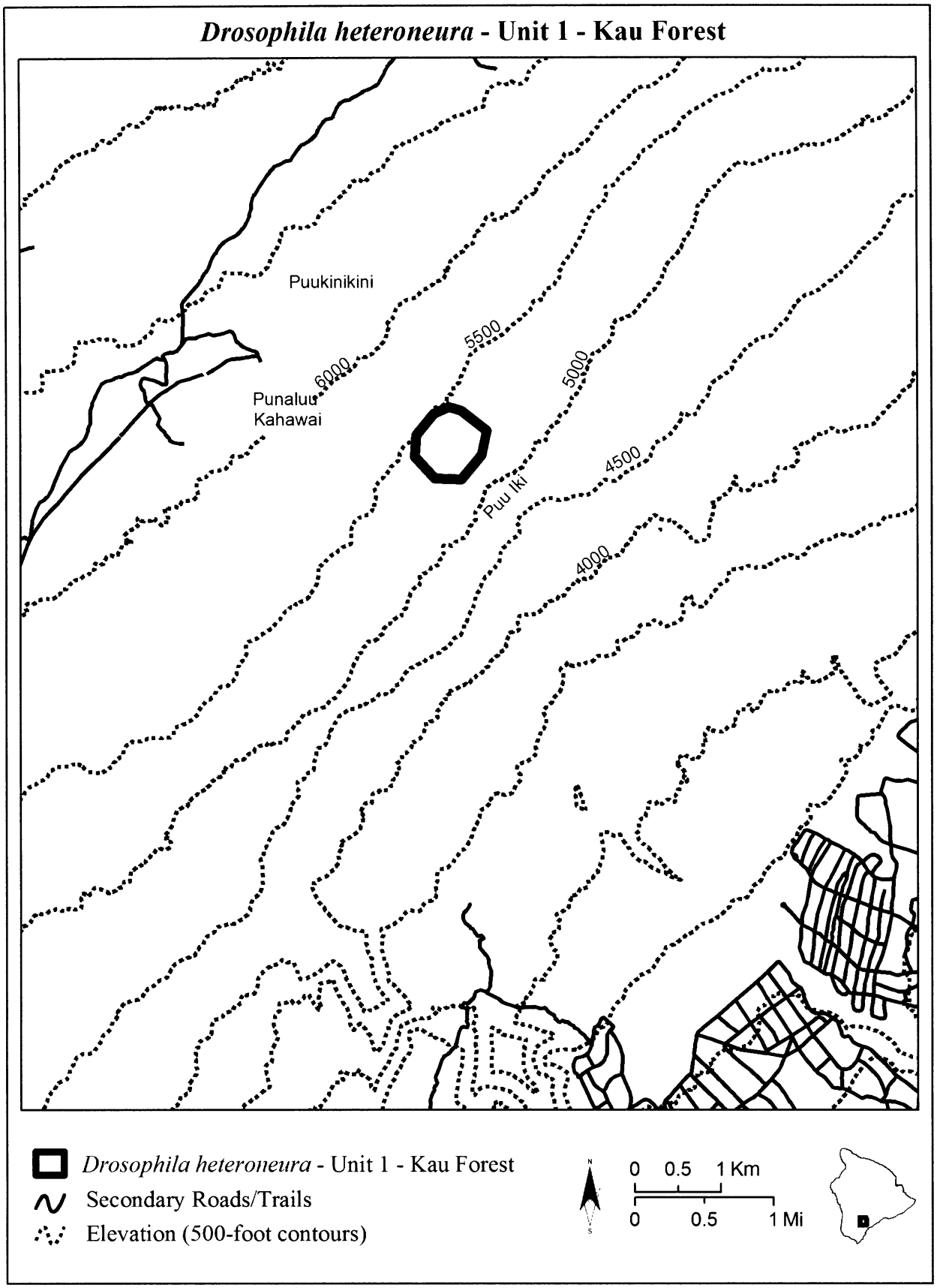
Index Map of Critical Habitat Units for - *Drosophila heteroneura*



(6) *Drosophila heteroneura*—Unit 1—Kau Forest, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 859357, 2130685; 859117, 2130401; 858810, 2130412; 858577, 2130667; 858596, 2130918; 858800, 2131167; 858976, 2131240; 859117, 2131196; 859416, 2130970.

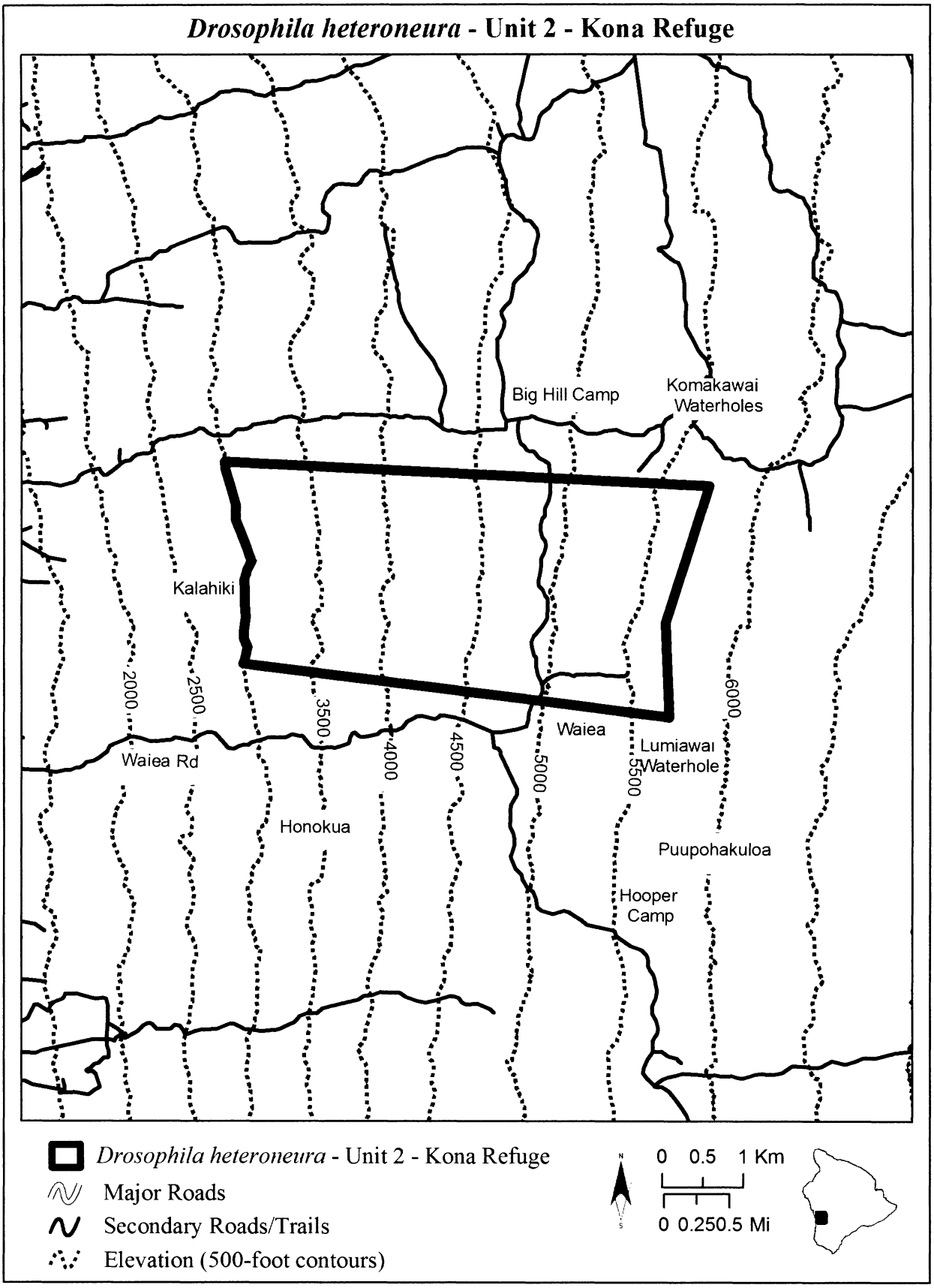
(ii) Note: Map of *Drosophila heteroneura*—Unit 1—Kau Forest follows:


Drosophila heteroneura - Unit 1 - Kau Forest
Puukinikini
Punaluu
Kahawai
6000
5500
5000
4500
4000
Puu Iki
Drosophila heteroneura - Unit 1 - Kau Forest
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.5 1 Mi

(7) *Drosophila heteroneura*—Unit 2—Kona Refuge, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 836880, 2145492; 836927, 2144316; 836473, 2144373; 835378, 2144516; 831663, 2144980; 831685, 2145029; 831718, 2145184; 831669, 2145289; 831669, 2145387; 831694, 2145557; 831685, 2145727; 831685, 2145882; 831677, 2146020; 831710, 2146149; 831767, 2146247; 831685, 2146482; 831572, 2146766; 831572, 2146953; 831515, 2147156; 831442, 2147391; 831438, 2147486; 837419, 2147183.

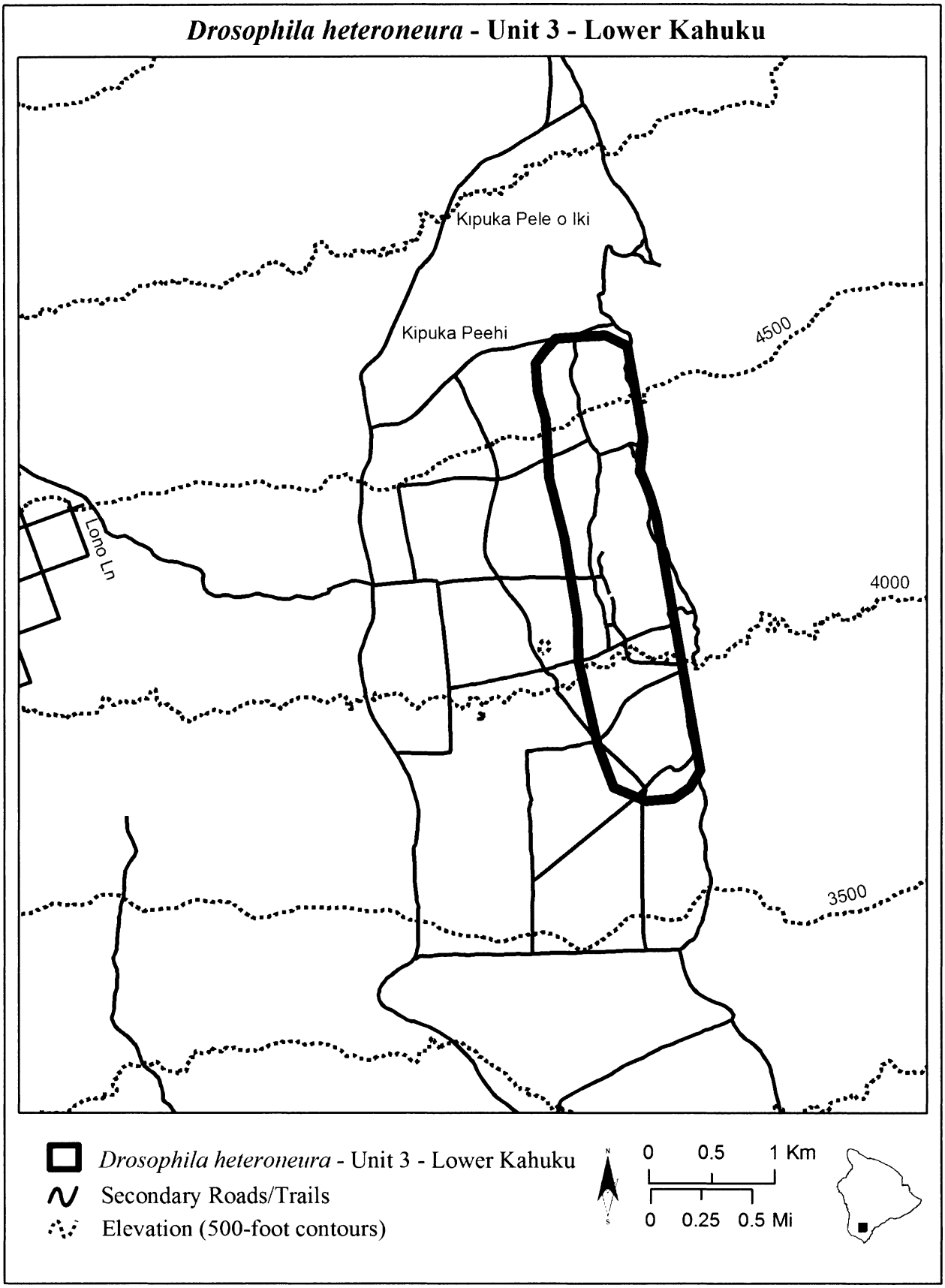
(ii) Note: Map of *Drosophila heteroneura*—Unit 2—Kona Refuge follows:


Drosophila heteroneura - Unit 2 - Kona Refuge
Big Hill Camp
Komakawai Waterholes
Kalahiki
2000
2500
3500
4000
4500
5000
5500
6000
Waiea
Waiea Rd
Lumiawai Waterhole
Honokua
Puupohakuloa
Hooper Camp
Drosophila heteroneura - Unit 2 - Kona Refuge
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.250.5 Mi

(8) *Drosophila heteroneura*—Unit 3—Lower Kahuku, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 849578, 2119874; 849925, 2117860; 849842, 2117726; 849716, 2117636; 849492, 2117618; 849240, 2117726; 849114, 2118058; 848962, 2118723; 848953, 2119065; 848845, 2119720; 848728, 2120187; 848701, 2120646; 848638, 2120870; 848620, 2121095; 848692, 2121194; 848782, 2121292; 849007, 2121310; 849177, 2121319; 849350, 2121233; 849475, 2120505; 849474, 2120484; 849447, 2120250; 849528, 2120044.

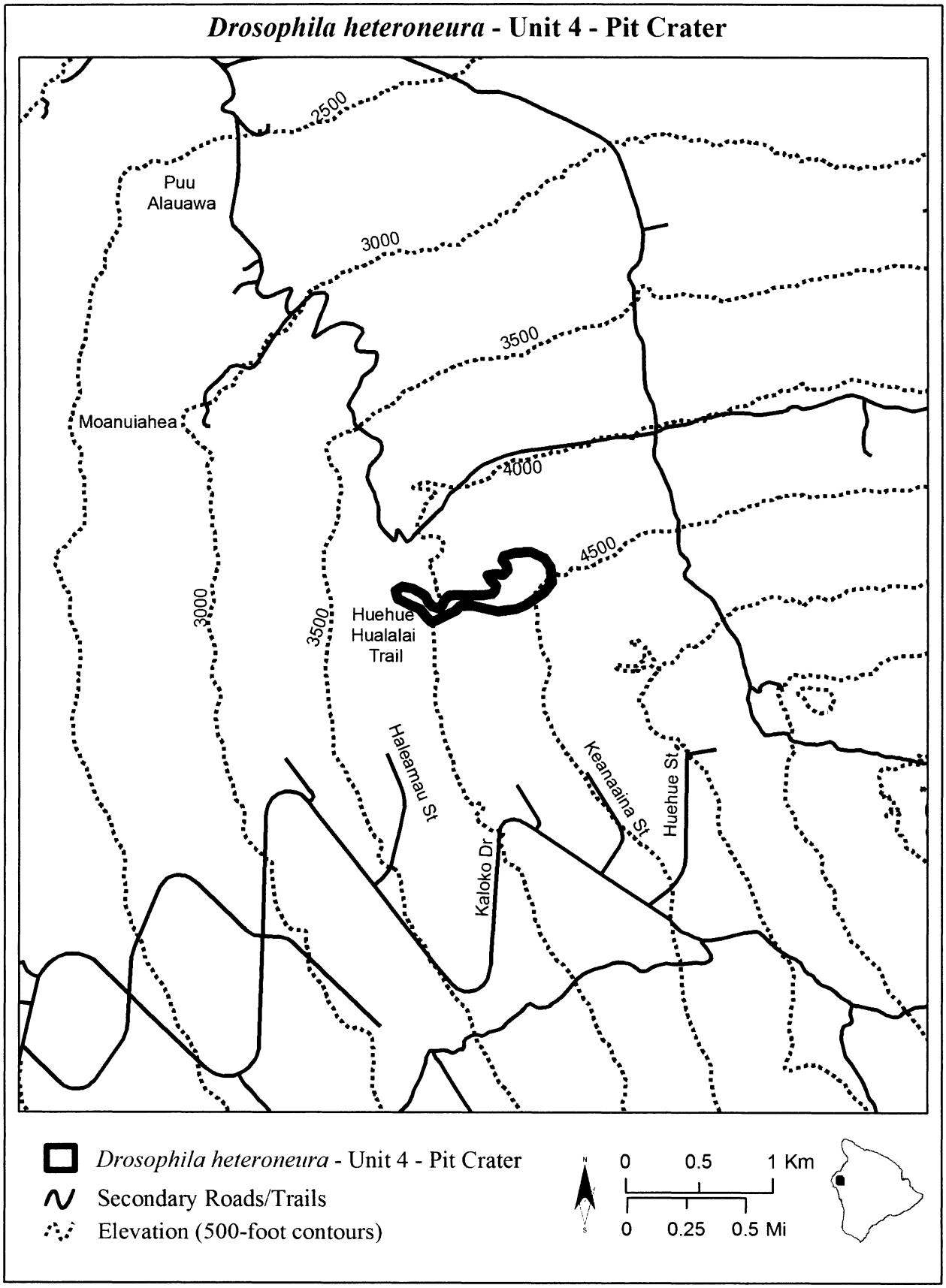
(ii) Note: Map of *Drosophila heteroneura*—Unit 3—Lower Kahuku follows:


Drosophila heteroneura - Unit 3 - Lower Kahuku
Kipuka Pele o Iki
Kipuka Peehi
4500
4000
3500
Lono Ln
Drosophila heteroneura - Unit 3 - Lower Kahuku
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(9) *Drosophila heteroneura*—Unit 4—Pit Crater, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 821660, 2184453; 821670, 2184348; 821617, 2184279; 821490, 2184191; 821428, 2184164; 821304, 2184150; 821131, 2184187; 821052, 2184187; 821012, 2184150; 820889, 2184086; 820850, 2184076; 820824, 2184102; 820778, 2184164; 820705, 2184193; 820626, 2184233; 820610, 2184289; 820657, 2184318; 820673, 2184316; 820707, 2184310; 820723, 2184306; 820747, 2184293; 820790, 2184269; 820818, 2184247; 820832, 2184215; 820861, 2184180; 820905, 2184168; 820929, 2184191; 820939, 2184221; 820974, 2184255; 821024, 2184261; 821109, 2184261; 821206, 2184261; 821264, 2184269; 821282, 2184285; 821292, 2184322; 821254, 2184360; 821232, 2184396; 821276, 2184404; 821341, 2184400; 821369, 2184431; 821363, 2184463; 821333, 2184499; 821345, 2184528; 821426, 2184550; 821531, 2184554; 821619, 2184513.

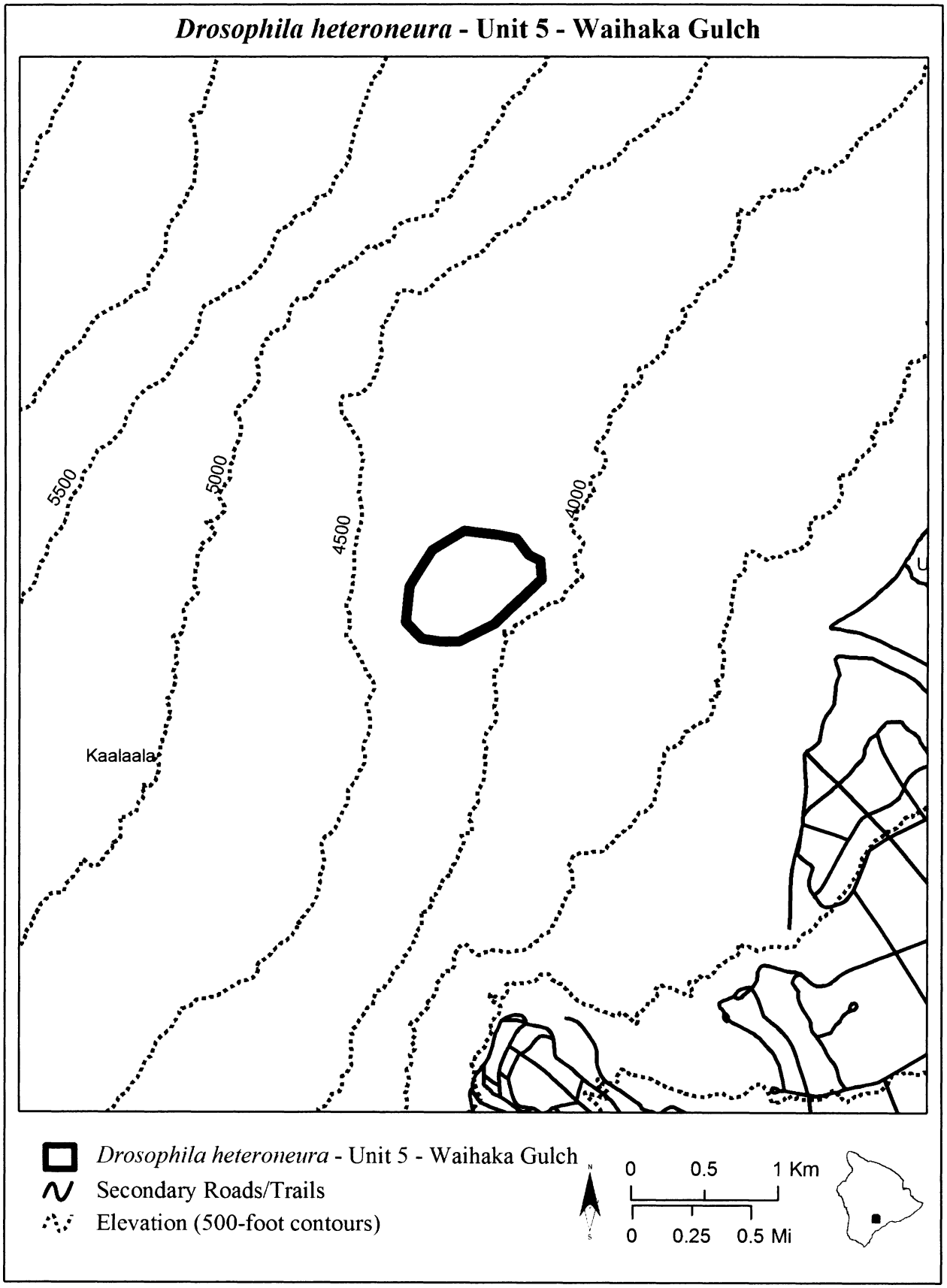
(ii) Note: Map of *Drosophila heteroneura*—Unit 4—Pit Crater follows:


Drosophila heteroneura - Unit 4 - Pit Crater
2500
Puu
Alauawa
3000
3500
Moanuiahea
4000
4500
3000
3500
Huehue
Hualalai
Trail
Haleamau St
Kaloko Dr
Keanaaina St
Huehue St
Drosophila heteroneura - Unit 4 - Pit Crater
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(10) *Drosophila heteroneura*—Unit 5—Waihaka Gulch, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 868924, 2138585; 868686, 2138463; 868564, 2138464; 868434, 2138482; 868325, 2138598; 868350, 2138841; 868378, 2138886; 868503, 2139088; 868720, 2139220; 868946, 2139193; 869076, 2139167; 869160, 2139055; 869238, 2139018; 869248, 2138892.

(ii) Note: Map of *Drosophila heteroneura*—Unit 5—Waihaka Gulch follows:



BILLING CODE 4310–55–C

Hawaiian picture-wing fly (*Drosophila montgomeryi*)

(1) Critical habitat units are depicted for County of Honolulu, Oahu, Hawaii, on the maps below.

(2) The primary constituent elements of critical habitat for *Drosophila montgomeryi* are:

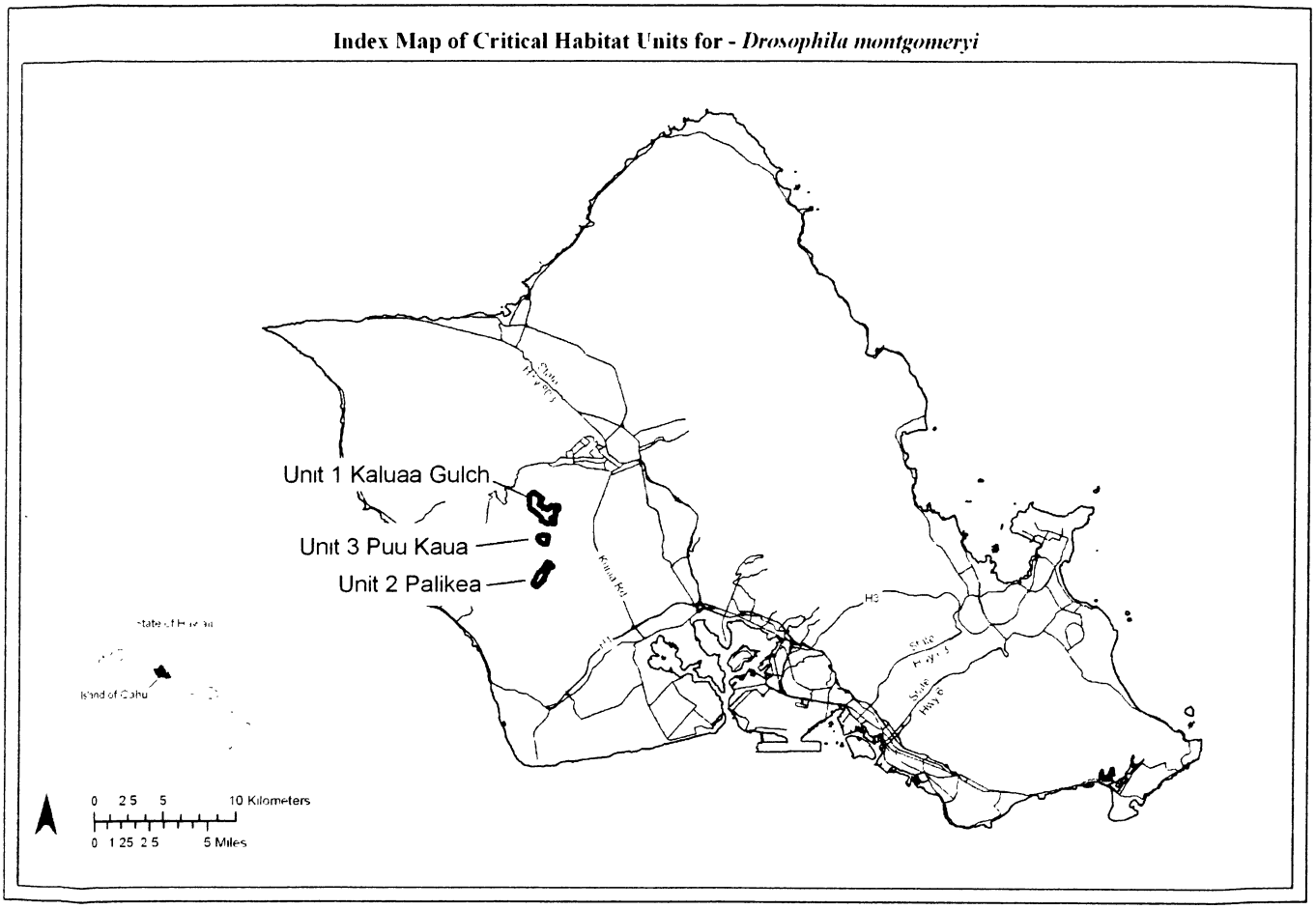
(i) Mesic, lowland, diverse ohia and koa forest between the elevations of 1,900–2,900 ft (580–885 m); and

(ii) The larval host plant *Urera kaalae*.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) Note: Index map of critical habitat units for *Drosophila montgomery i* follows:



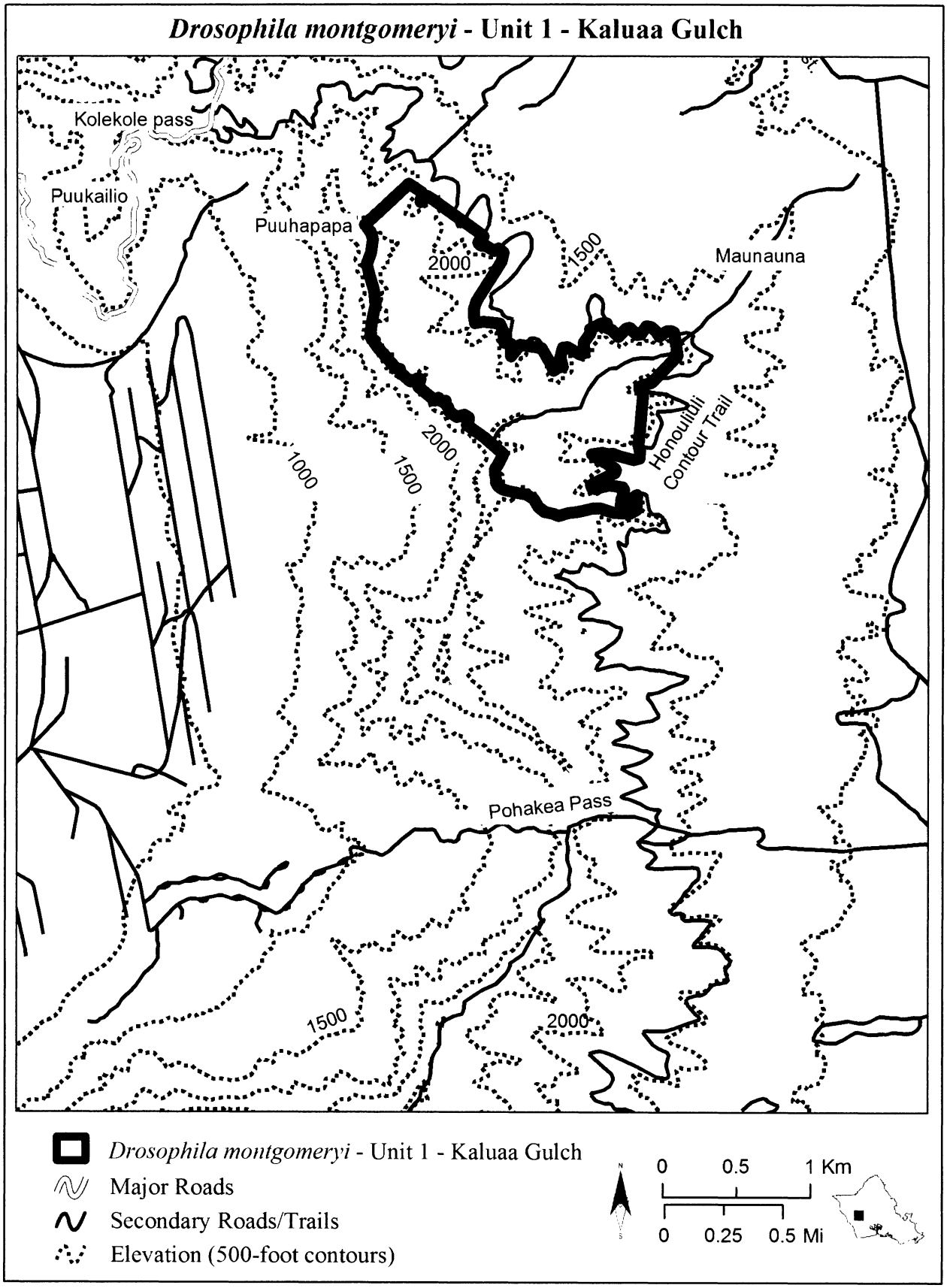
(6) *Drosophila montgomeryi*—Unit 1—Kaluaa Gulch, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 593240, 2374436; 593231, 2374371; 593281, 2374410; 593315, 2374385; 593612, 2374173; 593656, 2374138; 593621, 2374096; 593641, 2374077; 593676, 2374072; 593703, 2374057; 593734, 2374039; 593758, 2374058; 593793, 2374029; 593779, 2373964; 593731, 2373894; 593660, 2373784; 593609, 2373702; 593592, 2373648; 593592, 2373594; 593598, 2373553; 593657, 2373561; 593770, 2373549; 593792, 2373496; 593797, 2373417; 593842, 2373411; 593842, 2373326; 593905, 2373404; 594053, 2373383; 594103, 2373292; 594134, 2373228; 594156, 2373250; 594194, 2373256; 594178, 2373323; 594196, 2373386; 594229, 2373390; 594312, 2373340; 594341, 2373350; 594339, 2373421; 594383, 2373487; 594381, 2373513; 594460, 2373552; 594496, 2373553; 594497, 2373518; 594526, 2373509; 594572, 2373460; 594632, 2373519; 594649, 2373523; 594699, 2373475; 594728, 2373476; 594762, 2373532; 594791, 2373529; 594828, 2373501; 594852, 2373465; 594903, 2373501; 594933, 2373500; 594952, 2373489; 594974, 2373334; 594800, 2373150; 594718, 2373120; 594718, 2373102; 594744, 2373091; 594710, 2372721; 594720, 2372686; 594716, 2372633; 594678, 2372623; 594566, 2372651; 594536, 2372666; 594506, 2372663; 594467, 2372672; 594395, 2372663; 594406, 2372650; 594546, 2372567; 594558, 2372553; 594551, 2372535; 594389, 2372452; 594395, 2372434; 594415, 2372428; 594511, 2372449; 594603, 2372437; 594614, 2372421; 594607, 2372385; 594593, 2372353; 594591, 2372317; 594618, 2372322; 594661, 2372357; 594700, 2372384; 594696, 2372334; 594697, 2372333; 594697, 2372283; 594652, 2372257; 594541, 2372266; 594454, 2372294; 594400, 2372294; 594293, 2372267; 594231, 2372261; 594168, 2372241; 594126, 2372258; 594075, 2372267; 594030, 2372303; 593999, 2372354; 593948, 2372388; 593889, 2372397; 593812, 2372413; 593781, 2372425; 593756, 2372442; 593742, 2372467; 593742, 2372490; 593736, 2372521; 593736, 2372560; 593757, 2372587; 593790,

2372662; 593663, 2372772; 593543, 2372859; 593558, 2372894; 593555, 2372910; 593526, 2372928; 593476, 2372912; 593422, 2372953; 593420, 2372976; 593403, 2372997; 593400, 2373025; 593373, 2373016; 593352, 2373044; 593328, 2373025; 593215, 2373118; 593230, 2373171; 593214, 2373176; 593163, 2373154; 593095, 2373213; 593091, 2373238; 593064, 2373243; 593019, 2373295; 592937, 2373388; 592889, 2373462; 592897, 2373535; 592908, 2373597; 592923, 2373668; 592914, 2373772; 592889, 2373866; 592868, 2373941; 592867, 2373950; 592894, 2374029; 592908, 2374120; 592894, 2374162; 592860, 2374213; 592854, 2374216; 593151, 2374494.

(ii) Note: Map of *Drosophila montgomeryi*—Unit 1—Kaluaa Gulch follows:

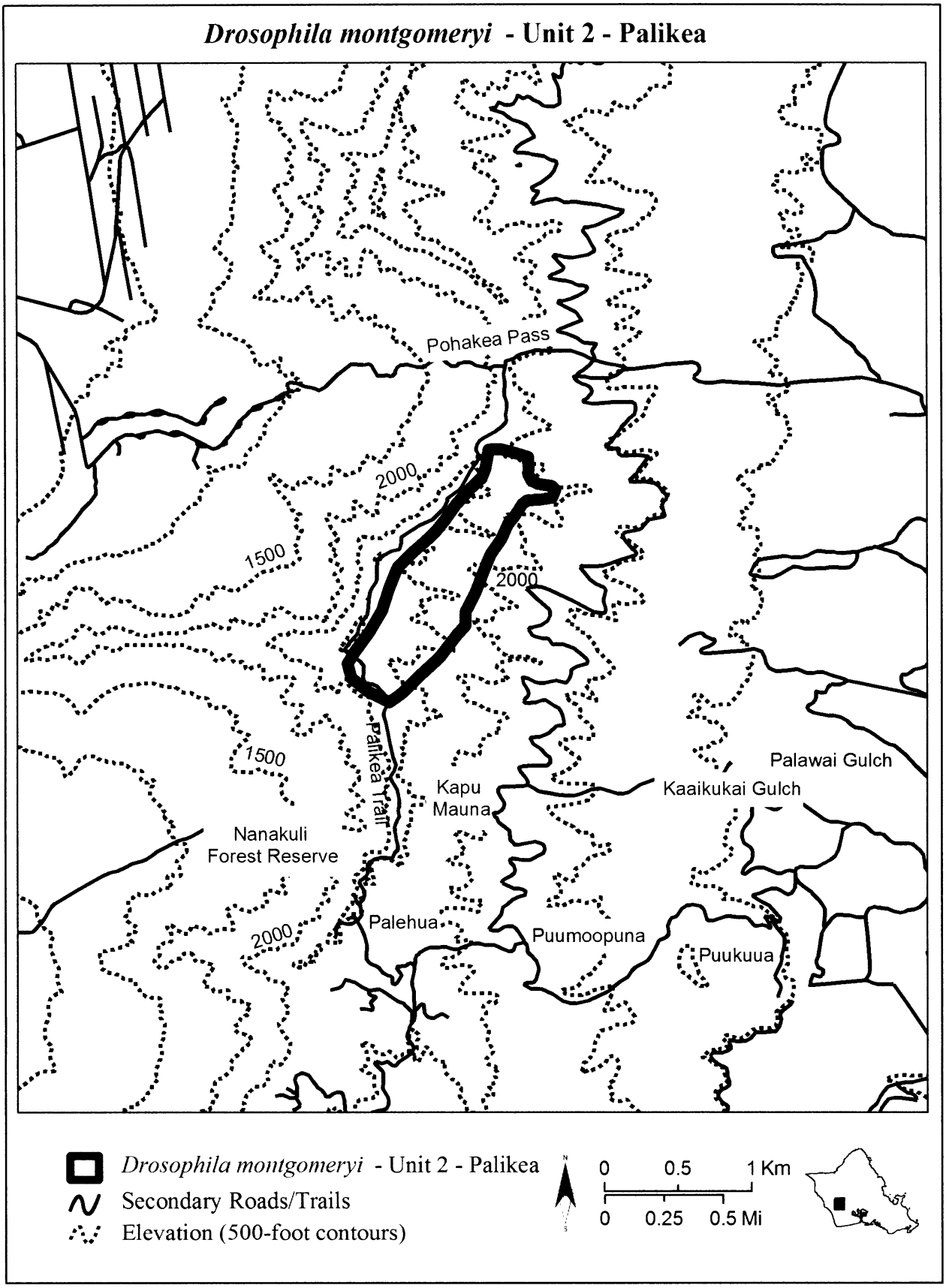
BILLING CODE 4310–55–P


Drosophila montgomeryi - Unit 1 - Kaluaa Gulch
Kolekole pass
Puukailio
Puuhapapa
2000
1500
Maunauna
Honouliuli Contour Trail
2000
1500
1000
Pohakea Pass
1500
2000
Drosophila montgomeryi - Unit 1 - Kaluaa Gulch
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(7) *Drosophila montgomeryi*—Unit 2—Palikea, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 593529, 2367854; 593448, 2367801; 593302, 2367874; 593242, 2367927; 593193, 2367967; 593165, 2368065; 593217, 2368150; 593314, 2368283; 593399, 2368425; 593448, 2368578; 593505, 2368716; 593622, 2368833; 593703, 2368906; 593764, 2368963; 593832, 2369044; 593901, 2369145; 594002, 2369262; 594079, 2369331; 594104, 2369396; 594120, 2369485; 594124, 2369521; 594148, 2369525; 594213, 2369525; 594310, 2369497; 594395, 2369473; 594399, 2369392; 594396, 2369356; 594417, 2369313; 594461, 2369290; 594551, 2369278; 594579, 2369250; 594559, 2369197; 594472, 2369183; 594391, 2369179; 594354, 2369153; 594302, 2369072; 594257, 2369015; 594213, 2368914; 594136, 2368809; 594083, 2368672; 594035, 2368550; 593966, 2368417; 593966, 2368324; 593909, 2368259; 593792, 2368105; 593675, 2368000.

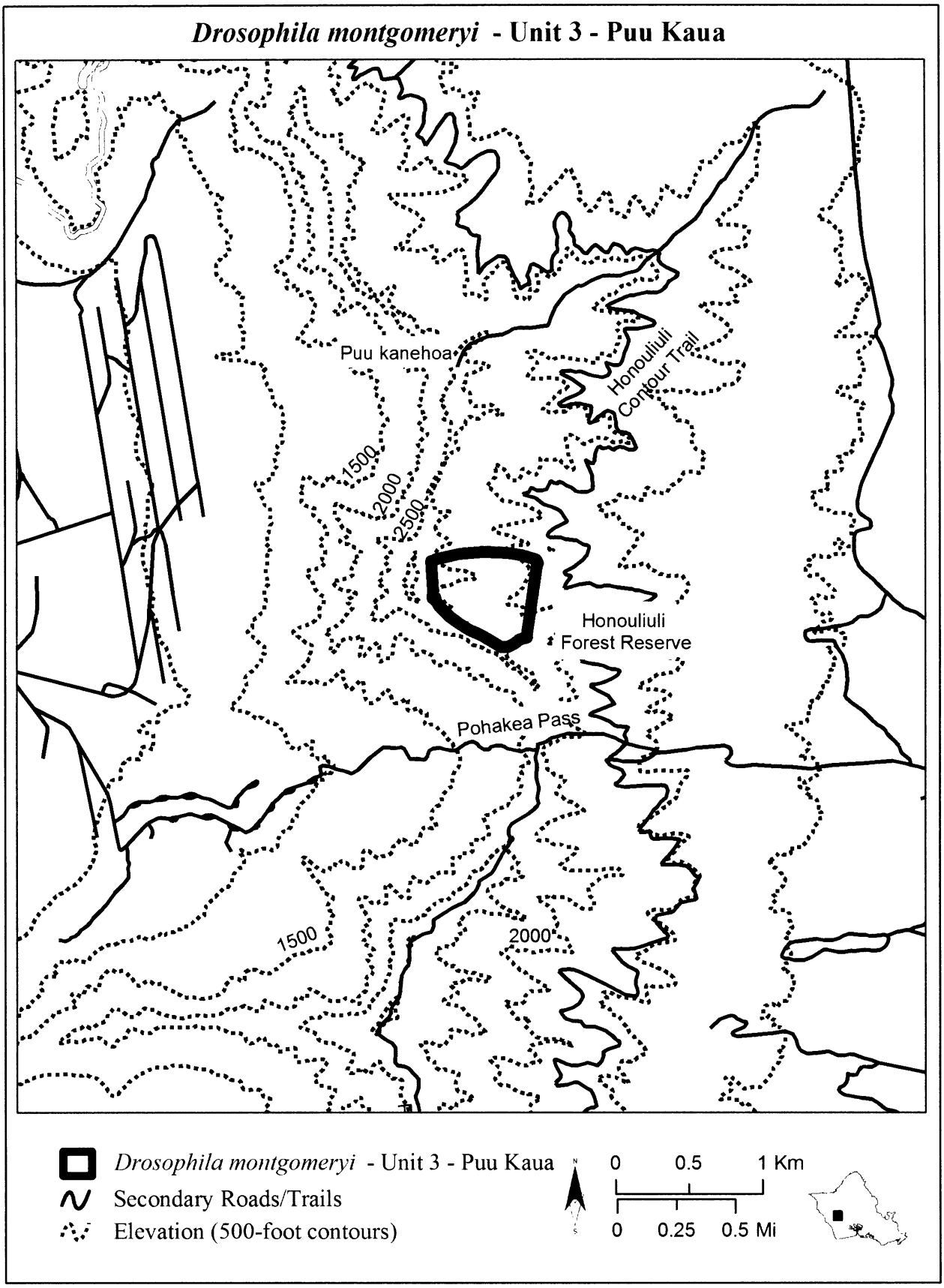
(ii) Note: Map of *Drosophila montgomeryi*—Unit 2—Palikea follows:


Drosophila montgomeryi - Unit 2 - Palikea
Pohakea Pass
2000
1500
2000
1500
Palikea Trail
Kapu
Mauna
Palawai Gulch
Kaaikukai Gulch
Nanakuli
Forest Reserve
Palehua
2000
Puumoopuna
Puukuua
Drosophila montgomeryi - Unit 2 - Palikea
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(8) D*rosophila montgomeryi*—Unit 3—Puu Kaua, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 594166, 2370854; 594166, 2370853; 594164, 2370854; 594122, 2370843; 594090, 2370815; 594040, 2370789; 593996, 2370789; 593930, 2370827; 593852, 2370875; 593778, 2370907; 593716, 2370947; 593642, 2370999; 593602, 2371041; 593574, 2371067; 593558, 2371095; 593539, 2371118; 593531, 2371121; 593534, 2371173; 593519, 2371375; 593533, 2371375; 593552, 2371390; 593628, 2371404; 593716, 2371426; 593794, 2371431; 593876, 2371437; 593974, 2371435; 594036, 2371431; 594138, 2371415; 594190, 2371399; 594232, 2371385; 594246, 2371359; 594239, 2371354; 594170, 2370879; 594172, 2370877; 594170, 2370855.

(ii) Note: Map of *Drosophila montgomeryi*—Unit 3—Puu Kaua follows:


Drosophila montgomeryi - Unit 3 - Puu Kaua
Puu kanehoa
Honouliuli Contour Trail
1500
2000
2500
Honouliuli Forest Reserve
Pohakea Pass
1500
2000
Drosophila montgomeryi - Unit 3 - Puu Kaua
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

Hawaiian Picture-Wing Fly (*Drosophila Mulli*)

(1) Critical habitat units are depicted for County of Hawaii, island of Hawaii, Hawaii, on the maps below.

(2) The primary constituent elements of critical habitat for *Drosophila mulli* are:

(i) Wet, montane, ohia forest between the elevations of 2,150–3,250 ft (655–990 m); and

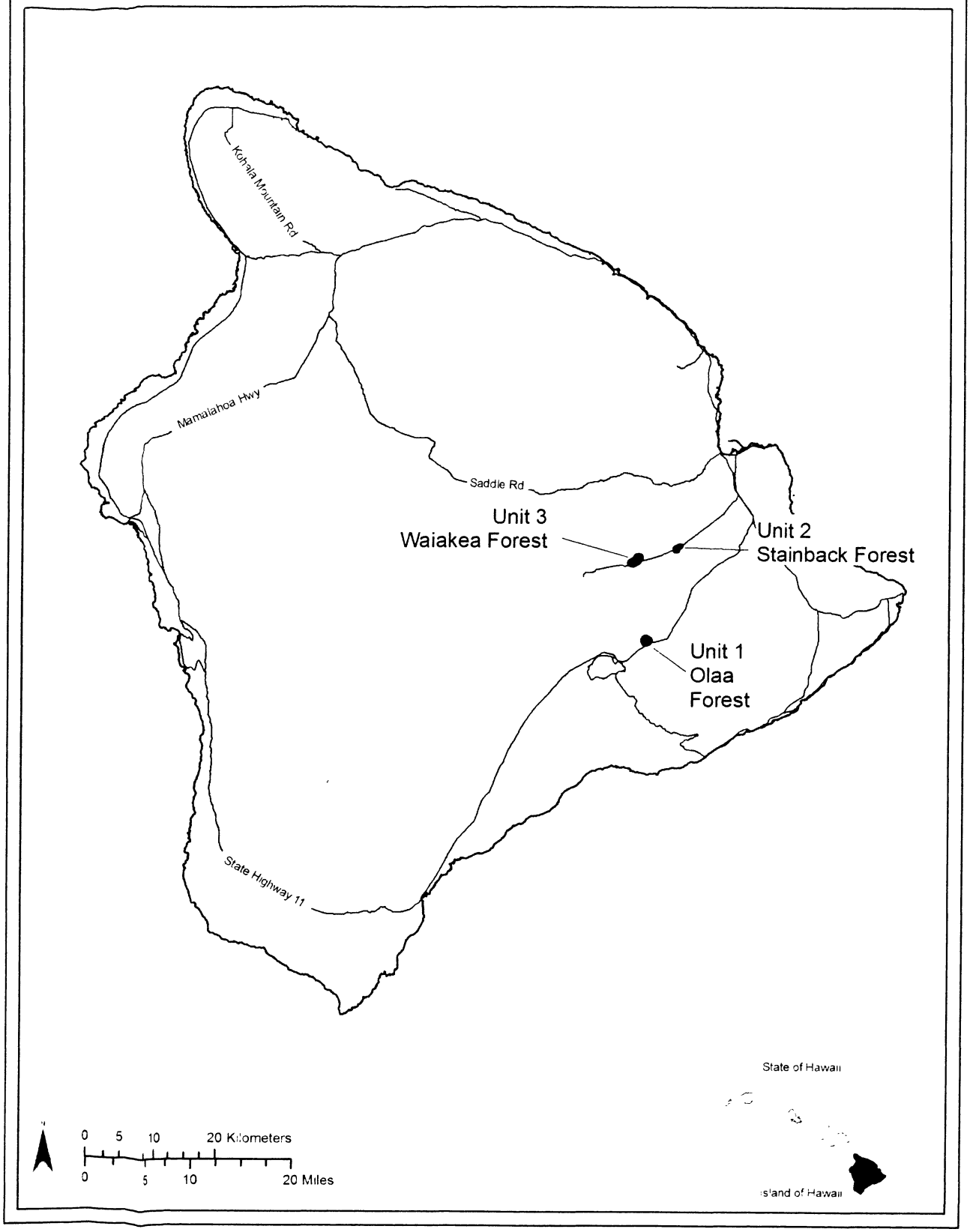
(ii) The larval host plant *Pritchardia beccariana*.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) Note: Index map of critical habitat units for *Drosophila mulli* follows:

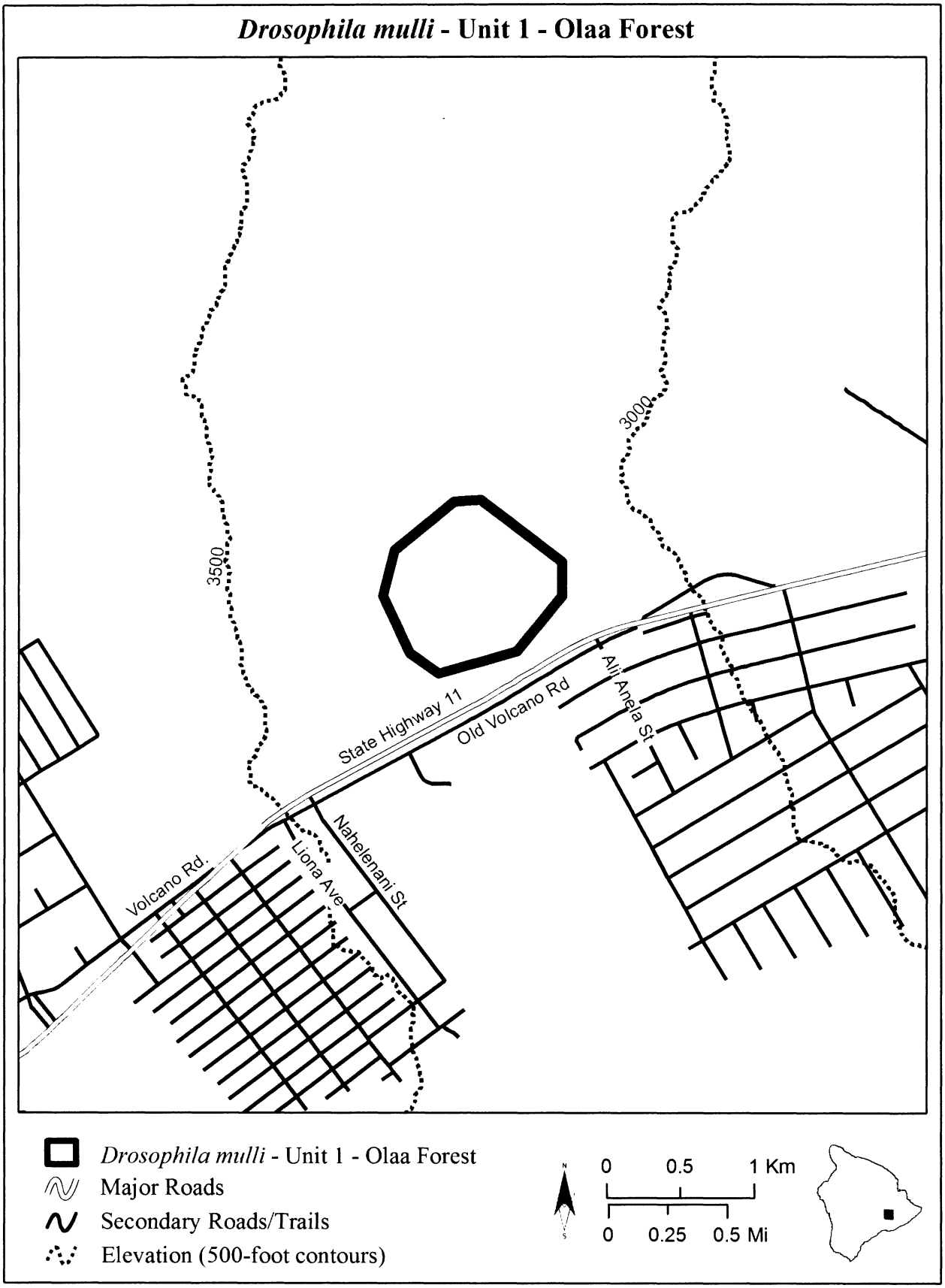
Index Map of Critical Habitat Units for - *Drosophila mulli*



(6) *Drosophila mulli*—Unit 1—Olaa Forest, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 898754, 2154890; 898225, 2154740; 898030, 2154878; 897846, 2155268; 897927, 2155578; 898328, 2155910; 898508, 2155922; 899064, 2155498; 899064, 2155268.

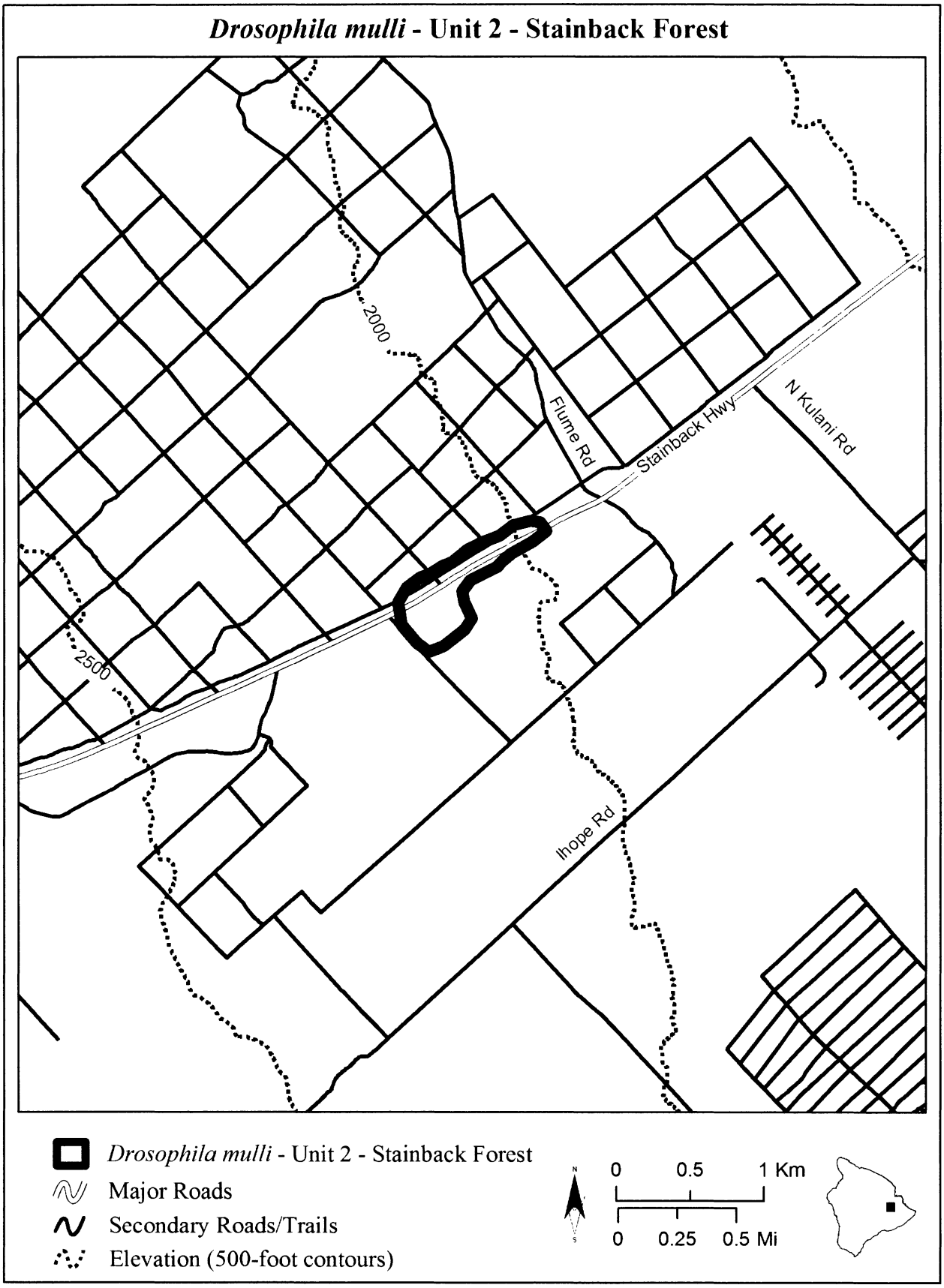
(ii) Note: Map of *Drosophila mulli*—Unit 1—Olaa Forest follows:


Drosophila mulli - Unit 1 - Olaa Forest
3000
3500
State Highway 11
Old Volcano Rd
Ali'i Anela St
Nahelenani St
Liona Ave
Volcano Rd.
Drosophila mulli - Unit 1 - Olaa Forest
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
N
0 0.5 1 Km
0 0.25 0.5 Mi

(7) *Drosophila mulli*—Unit 2—Stainback Forest, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 903259, 2169945; 903159, 2169907; 903080, 2169965; 902974, 2170089; 902953, 2170247; 903012, 2170346; 903101, 2170415; 903166, 2170439; 903245, 2170490; 903324, 2170521; 903420, 2170603; 903509, 2170651; 903636, 2170699; 903732, 2170771; 903849, 2170799; 903914, 2170789; 903955, 2170730; 903869, 2170662; 903866, 2170658; 903718, 2170579; 903653, 2170521; 903622, 2170487; 903441, 2170394; 903386, 2170322; 903399, 2170250; 903451, 2170133; 903403, 2170058.

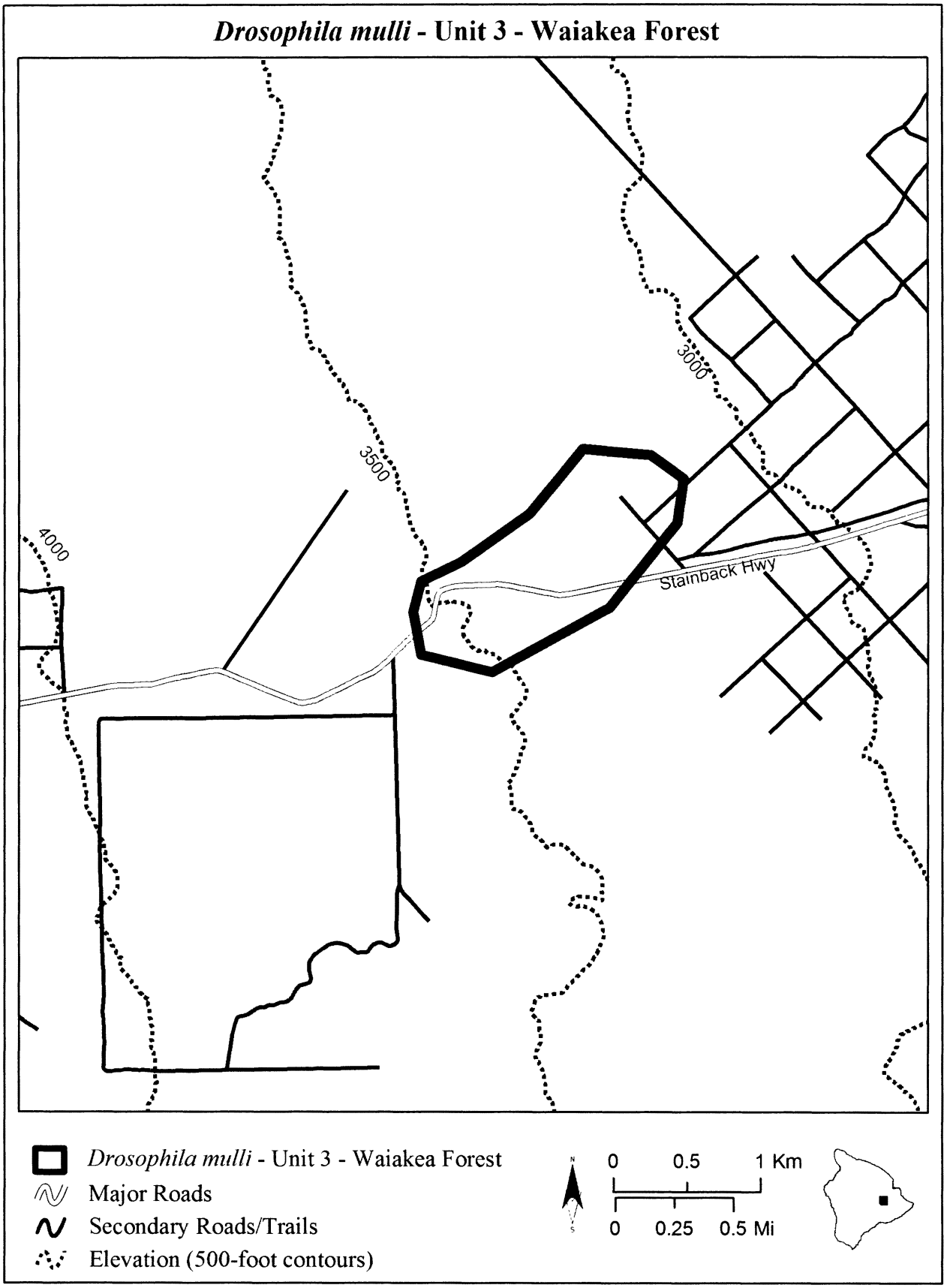
(ii) Note: Map of *Drosophila mulli*—Unit 2—Stainback Forest follows:


Drosophila mulli - Unit 2 - Stainback Forest
2000
2500
Flume Rd
Stainback Hwy
N Kulani Rd
Ihope Rd
Drosophila mulli - Unit 2 - Stainback Forest
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
N
S
0
0.5
1 Km
0
0.25
0.5 Mi

(8) *Drosophila mulli*—Unit 3—Waiakea Forest, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 897021, 2168026; 896225, 2167587; 895745, 2167704; 895687, 2167996; 895745, 2168207; 896014, 2168335; 896480, 2168668; 896841, 2169108; 897302, 2169068; 897522, 2168908; 897482, 2168607.

(ii) Note: Map of *Drosophila mulli*—Unit 3—Waiakea Forest follows:



BILLING CODE 4310–55–C

Hawaiian picture-wing fly (*Drosophila musaphilia*)

(1) Critical habitat is depicted for County of Kauai, island of Kauai, Hawaii, on the map below.

(2) The primary constituent elements of critical habitat for *Drosophila musaphilia* are:

(i) Mesic, montane, ohia and koa forest between the elevations of 2,600–3,700 ft (790–1,130 m); and

(ii) The larval host plant *Acacia koa*.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

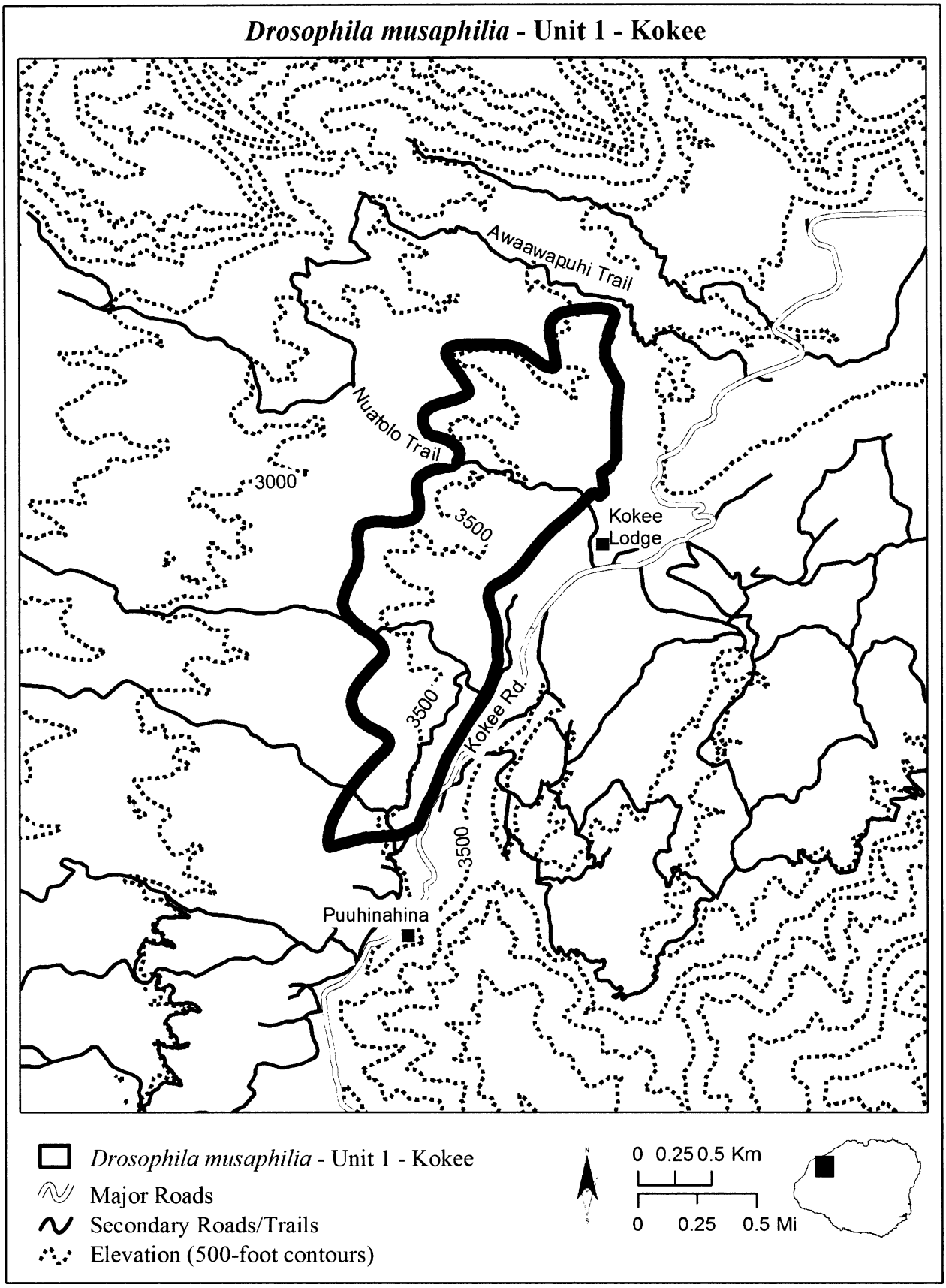
(4) Critical habitat map unit. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) *Drosophila musaphilia*—Unit 1—Kokee, Kauai County, island of Kauai, Hawaii.

(i) Land bounded by the following coordinates: 432035, 2448683; 432126, 2448510; 432111, 2448312; 432111, 2448119; 432106, 2447977; 432010, 2447906; 432025, 2447779; 431992, 2447749; 431962, 2447768; 431938, 2447766; 431926, 2447752; 431895, 2447719; 431861, 2447686; 431825, 2447651; 431786, 2447616; 431745, 2447581; 431701, 2447544; 431658, 2447505; 431616, 2447462; 431575, 2447417; 431535, 2447368; 431496, 2447318; 431457, 2447271; 431418, 2447231; 431379, 2447198; 431339, 2447172; 431299, 2447153; 431267, 2447131; 431247, 2447103; 431239, 2447068; 431244, 2447027; 431260, 2446979; 431278, 2446930; 431292, 2446881; 431300, 2446834; 431303, 2446788; 431302, 2446743; 431300, 2446700; 431301, 2446659; 431306, 2446621; 431252, 2446466; 431186, 2446345; 431181, 2446332; 430955, 2445963; 430860, 2445709; 430831, 2445664; 430760, 2445497; 430648, 2445441; 430416, 2445421; 430405, 2445422; 430396, 2445420; 430159, 2445358; 430153, 2445371; 430148, 2445402; 430150, 2445437; 430157, 2445475; 430170, 2445517; 430188, 2445562; 430212, 2445610; 430240, 2445660; 430270, 2445707; 430302, 2445754; 430335, 2445799; 430371, 2445842; 430407, 2445883; 430441, 2445921; 430474, 2445956; 430506, 2445988; 430535, 2446017; 430559, 2446044; 430567, 2446070; 430558, 2446095; 430533, 2446120; 430492, 2446144; 430441, 2446167; 430398, 2446193; 430363, 2446221; 430337, 2446252; 430320, 2446284; 430311, 2446319; 430309, 2446353; 430315, 2446388; 430327, 2446423; 430347, 2446457; 430373, 2446492; 430401, 2446525; 430430, 2446558; 430459, 2446589; 430489, 2446619; 430518, 2446649; 430531, 2446681; 430524, 2446716; 430497, 2446755; 430451, 2446797; 430387, 2446842; 430330, 2446887; 430288, 2446930; 430262, 2446971; 430250, 2447010; 430253, 2447047; 430263, 2447083; 430274, 2447118; 430288, 2447153; 430304, 2447187; 430323, 2447220; 430339, 2447254; 430350, 2447291; 430356, 2447331; 430358, 2447373; 430354, 2447418; 430351, 2447461; 430354, 2447496; 430361, 2447524; 430374, 2447545; 430392, 2447558; 430416, 2447567; 430445, 2447573; 430479, 2447576; 430518, 2447577; 430563, 2447574; 430609, 2447572; 430649, 2447573; 430684, 2447578; 430714, 2447587; 430737, 2447599; 430755, 2447616; 430767, 2447639; 430772, 2447667; 430772, 2447701; 430766, 2447740; 430756, 2447783; 430755, 2447821; 430762, 2447853; 430778, 2447879; 430802, 2447900; 430834, 2447916; 430864, 2447928; 430893, 2447937; 430920, 2447943; 430945, 2447947; 430968, 2447947; 430989, 2447952; 431007, 2447961; 431022, 2447974; 431035, 2447992; 431045, 2448014; 431049, 2448036; 431046, 2448057; 431036, 2448077; 431019, 2448096; 430996, 2448113; 430971, 2448128; 430946, 2448140; 430921, 2448149; 430896, 2448155; 430871, 2448158; 430849, 2448165; 430830, 2448179; 430815, 2448200; 430804, 2448228; 430796, 2448263; 430799, 2448299; 430816, 2448330; 430848, 2448356; 430894, 2448377; 430956, 2448393; 431018, 2448407; 431064, 2448423; 431094, 2448440; 431109, 2448459; 431107, 2448479; 431094, 2448502; 431076, 2448530; 431054, 2448563; 431027, 2448601; 430996, 2448643; 430967, 2448687; 430957, 2448722; 430966, 2448749; 430994, 2448766; 431042, 2448775; 431103, 2448778; 431162, 2448779; 431218, 2448779; 431269, 2448779; 431317, 2448777; 431361, 2448775; 431403, 2448767; 431443, 2448754; 431480, 2448736; 431515, 2448712; 431548, 2448685; 431579, 2448661; 431607, 2448643; 431633, 2448630; 431657, 2448622; 431678, 2448620; 431692, 2448631; 431697, 2448656; 431694, 2448695; 431683, 2448749; 431665, 2448816; 431657, 2448878; 431666, 2448928; 431692, 2448967; 431735, 2448994; 431795, 2449009; 431857, 2449019; 431913, 2449024; 431963, 2449027; 432008, 2449026; 432046, 2449022; 432076, 2449012; 432094, 2448996; 432100, 2448974; 432095, 2448945; 432078, 2448910; 432060, 2448872; 432053, 2448837; 432063, 2448834; 432035, 2448784.

(ii) Note: Map of *Drosophila musaphilia*—Unit 1—Kokee follows:

BILLING CODE 4310–55–P


Drosophila musaphilia - Unit 1 - Kokee
Awaawapuhi Trail
Nuatolo Trail
3000
3500
Kokee Lodge
Kokee Rd.
3500
3500
Puuhinahina
Drosophila musaphilia - Unit 1 - Kokee
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.25 0.5 Km
0 0.25 0.5 Mi

Hawaiian Picture-Wing Fly (*Drosophila Neoclavisetae*)

(1) Critical habitat is depicted for County of Maui, island of Maui, Hawaii, on the map below.

(2) The primary constituent elements of critical habitat for *Drosophila neoclavisetae* are:

(i) Wet, montane, ohia forest between the elevations of 3,500–4,500 ft (1,070–1,370 m); and

(ii) The larval host plants *Cyanea kunthiana* and *C. macrostegia* ssp. *macrostegia*.

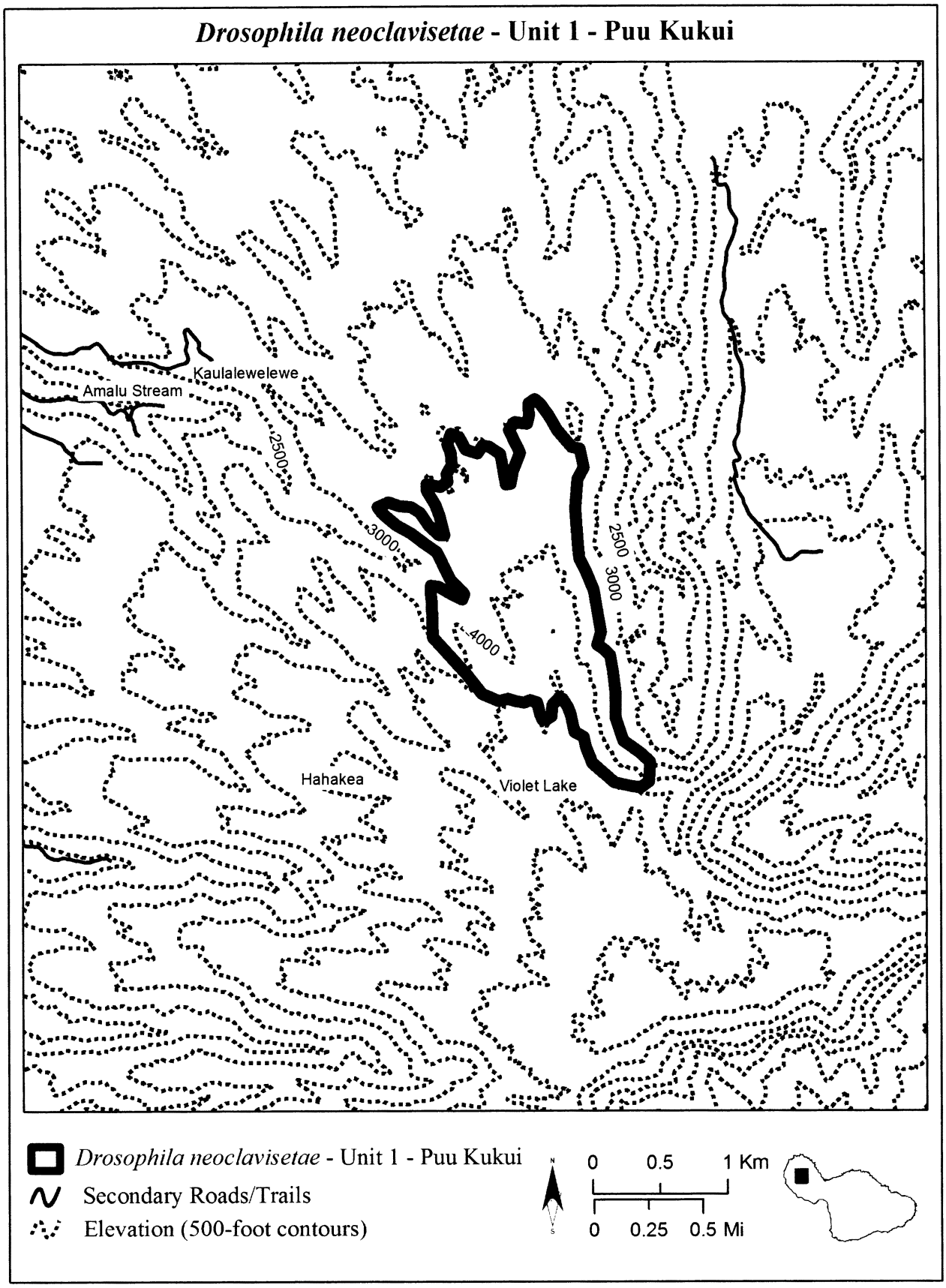
(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map unit. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) *Drosophila neoclavisetae*—Unit 1—Puu Kukui, Maui County, island of Maui, Hawaii.

(i) Land bounded by the following coordinates: 750380, 2316357; 750447, 2316239; 750554, 2316115; 750610, 2316104; 750638, 2315964; 750593, 2315879; 750577, 2315666; 750593, 2315407; 750605, 2315295; 750650, 2315205; 750711, 2315059; 750751, 2314806; 750762, 2314750; 750734, 2314654; 750790, 2314615; 750829, 2314576; 750852, 2314452; 750869, 2314300; 750869, 2314227; 750869, 2314115; 750925, 2313946; 751049, 2313856; 751122, 2313789; 751122, 2313766; 751116, 2313643; 751054, 2313598; 750981, 2313609; 750857, 2313637; 750695, 2313778; 750650, 2313896; 750633, 2313974; 750565, 2314008; 750537, 2314137; 750515, 2314194; 750481, 2314250; 750453, 2314261; 750402, 2314210; 750397, 2314126; 750357, 2314098; 750329, 2314098; 750312, 2314143; 750290, 2314227; 750239, 2314244; 750194, 2314227; 750133, 2314238; 750076, 2314255; 750009, 2314238; 749885, 2314289; 749773, 2314435; 749520, 2314710; 749515, 2314969; 749509, 2315036; 749509, 2315093; 749565, 2315087; 749649, 2315036; 749739, 2314991; 749756, 2315031; 749655, 2315132; 749599, 2315244; 749554, 2315340; 749458, 2315407; 749368, 2315480; 749254, 2315543; 749183, 2315602; 749145, 2315636; 749117, 2315676; 749197, 2315711; 749279, 2315683; 749363, 2315677; 749430, 2315632; 749498, 2315536; 749571, 2315469; 749610, 2315469; 749576, 2315610; 749548, 2315688; 749481, 2315801; 749481, 2315846; 749582, 2315823; 749633, 2315862; 749627, 2315919; 749666, 2315986; 749661, 2316076; 749633, 2316138; 749661, 2316216; 749722, 2316188; 749767, 2316098; 749857, 2316070; 749897, 2316126; 749942, 2316121; 750026, 2316065; 750043, 2315964; 750065, 2315840; 750099, 2315846; 750116, 2315941; 750172, 2316076; 750088, 2316244; 750133, 2316301; 750223, 2316289; 750239, 2316346; 750234, 2316436; 750279, 2316469; 750318, 2316436.

(ii) Note: Map of *Drosophila neoclavisetae*—Unit 1—Puu Kukui follows:



BILLING CODE 4310–55–C

Hawaiian Picture-Wing Fly (*Drosophila Obatai*)

(1) Critical habitat is depicted for County of Honolulu, island of Oahu, Hawaii, on the maps below.

(2) The primary constituent elements of critical habitat for *Drosophila obatai* are:

(i) Dry to mesic, lowland, ohia and koa forest between the elevations of 1,500–2,500 ft (460–760 m); and

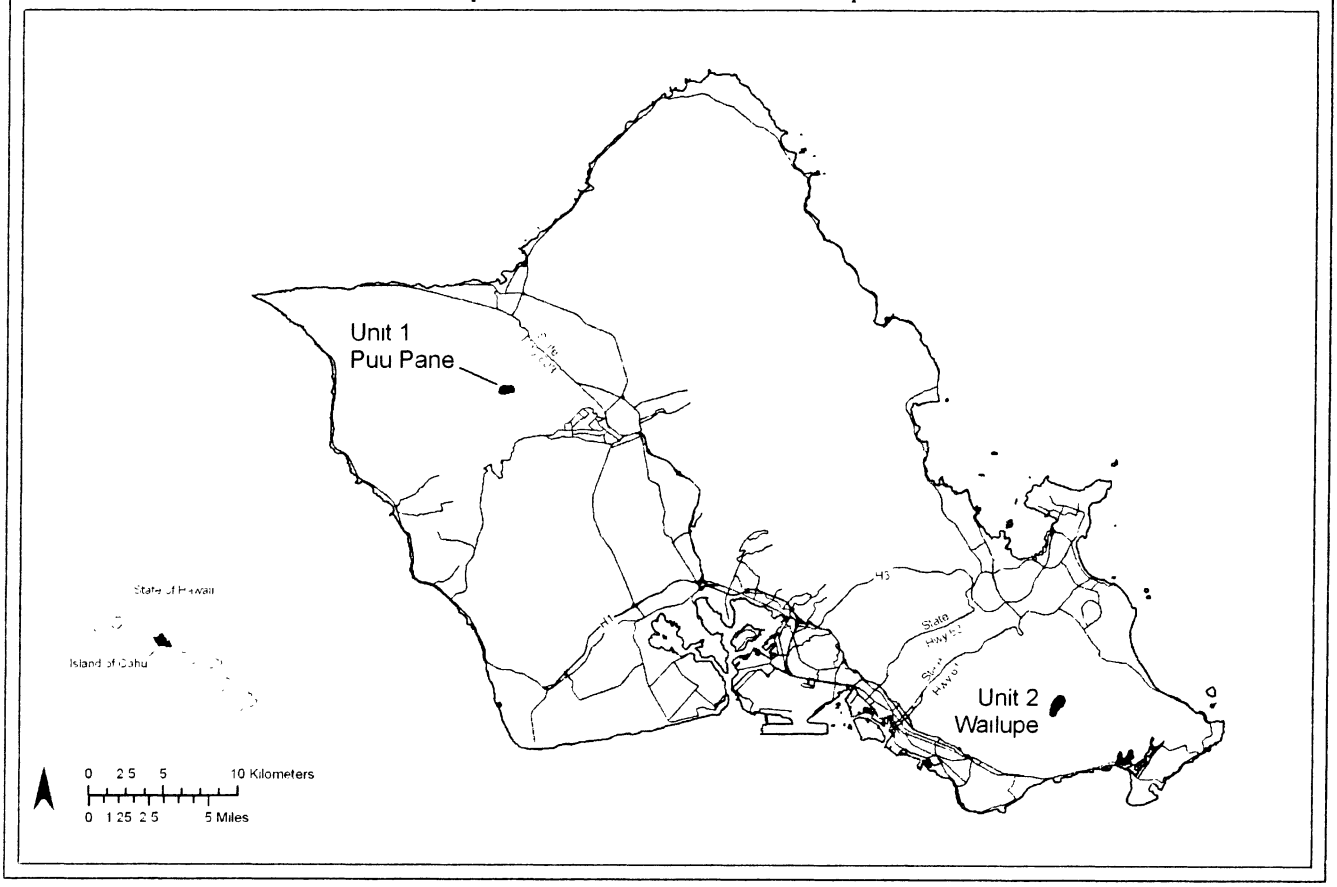
(ii) The larval host plant *Pleomele forbesii*.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) Note: Index map of the critical habitat units for *Drosophila obatai* follows:

Index Map of Critical Habitat Units for - *Drosophila obatai*

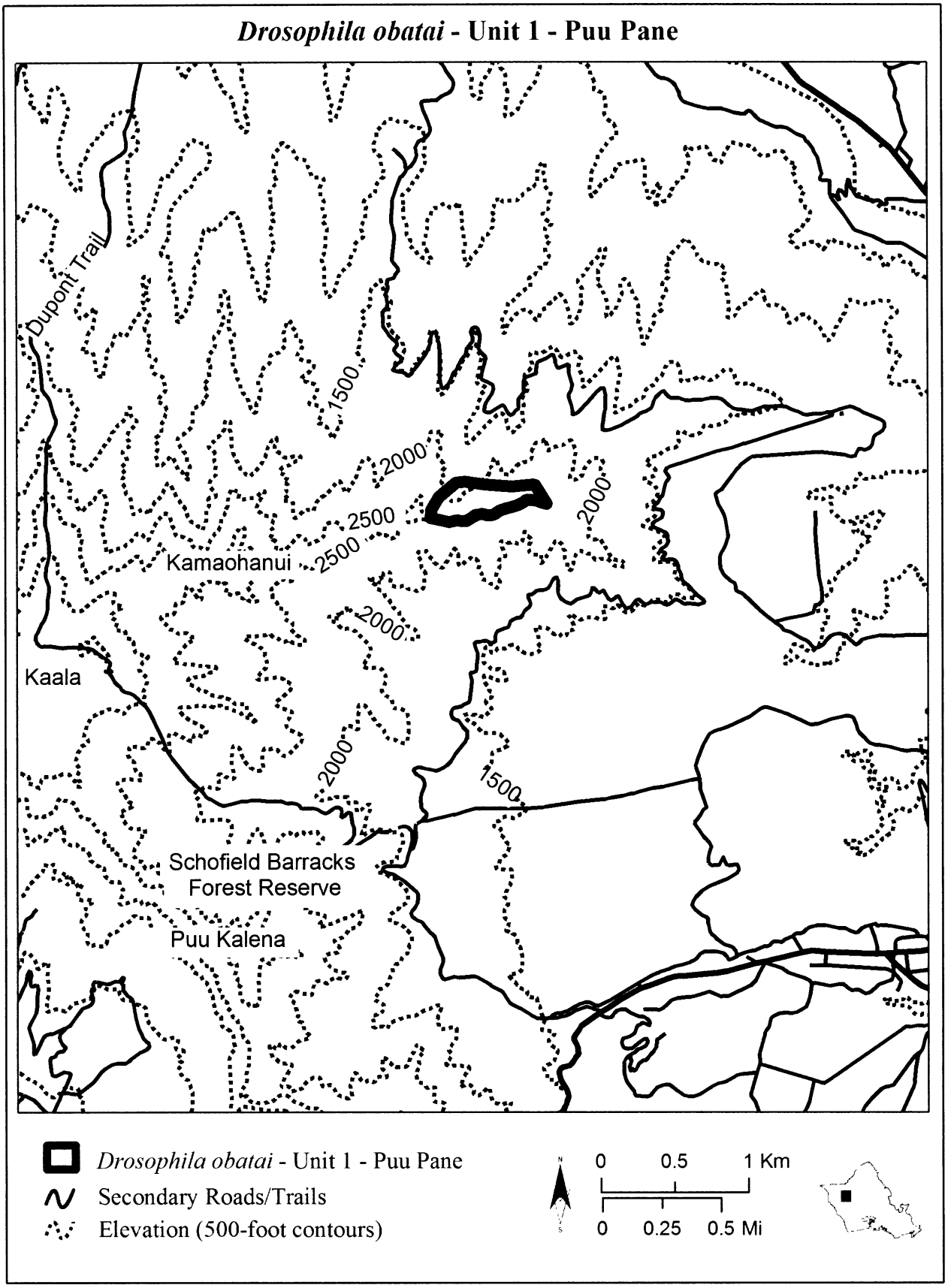


(6) *Drosophila obatai*—Unit 1—Puu Pane, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 591489, 2379704; 591662, 2379690; 591807, 2379704; 591822, 2379699; 591901, 2379571; 591871, 2379579; 591830, 2379596; 591830, 2379596; 591830, 2379596; 591830, 2379596; 591830, 2379596; 591830, 2379596; 591830, 2379596; 591791, 2379600; 591791, 2379600; 591791, 2379601; 591791, 2379600; 591791, 2379600; 591791, 2379600; 591766, 2379597; 591766, 2379597; 591766, 2379597; 591766, 2379597; 591766, 2379597; 591766, 2379597; 591741, 2379583; 591741, 2379583; 591710, 2379565; 591672, 2379554; 591672, 2379554; 591635, 2379542; 591614, 2379537; 591614, 2379537; 591614, 2379537; 591582, 2379526; 591582, 2379526; 591582, 2379526; 591582, 2379526; 591582, 2379526; 591545, 2379500; 591523, 2379495; 591496, 2379495; 591461, 2379505; 591461, 2379505; 591461, 2379505; 591461, 2379505; 591461, 2379505; 591461, 2379505; 591461, 2379505; 591461, 2379505; 591444, 2379502; 591444, 2379502; 591444, 2379502; 591444, 2379502; 591444, 2379502; 591432, 2379498; 591421, 2379497; 591421, 2379497; 591421, 2379497; 591421, 2379497; 591421, 2379497; 591420, 2379497; 591420, 2379497; 591420, 2379497; 591420, 2379497; 591420, 2379497; 591405, 2379487; 591405, 2379487; 591405, 2379487; 591405, 2379486; 591405, 2379486; 591405, 2379486; 591403, 2379483; 591354, 2379454; 591283, 2379460; 591240, 2379449; 591113, 2379474; 591116, 2379531; 591169, 2379618; 591284, 2379716; 591345, 2379723.

(ii) Note: Map of *Drosophila obatai*—Unit 1—Puu Pane follows:

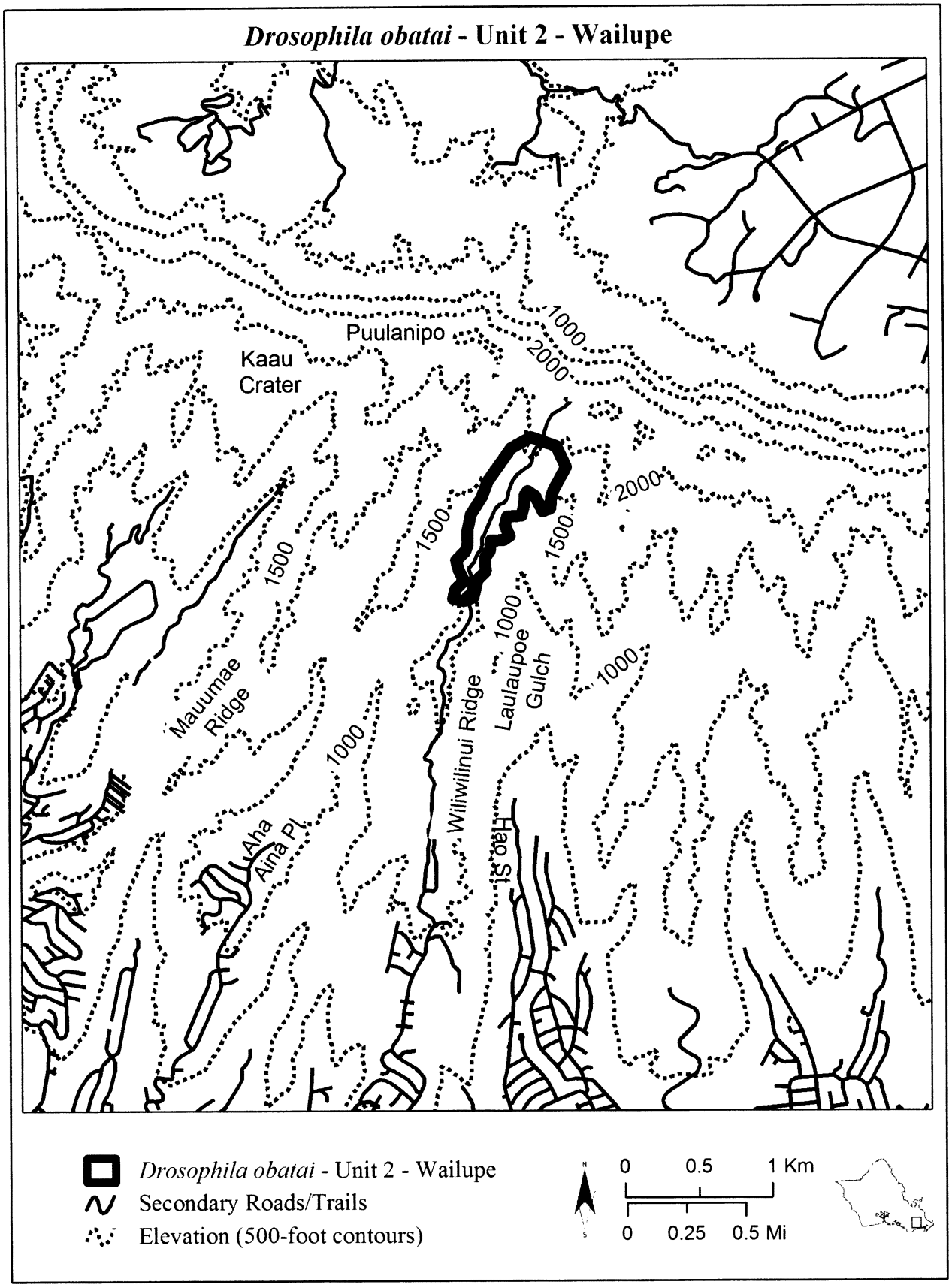
BILLING CODE 4310–55–P


Drosophila obatai - Unit 1 - Puu Pane
Dupont Trail
1500
2000
2500
2500
2000
Kamaohanui
2000
Kaala
2000
1500
Schofield Barracks
Forest Reserve
Puu Kalena
Drosophila obatai - Unit 1 - Puu Pane
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(7) *Drosophila obatai*—Unit 2—Wailupe, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 629222, 2358352; 629208, 2358307; 629199, 2358225; 629147, 2358205; 629100, 2358307; 629048, 2358343; 629028, 2358316; 629023, 2358250; 629005, 2358174; 628908, 2358169; 628890, 2358110; 628922, 2358034; 628883, 2358011; 628795, 2358007; 628791, 2357939; 628753, 2357885; 628759, 2357799; 628705, 2357743; 628676, 2357619; 628606, 2357592; 628536, 2357607; 628552, 2357673; 628610, 2357731; 628574, 2357806; 628559, 2357874; 628619, 2357932; 628637, 2357973; 628635, 2358074; 628660, 2358185; 628735, 2358298; 628775, 2358411; 628936, 2358634; 629070, 2358711; 629243, 2358647; 629307, 2358506.

(ii) Note: Map of *Drosophila obatai*—Unit 2—Wailupe follows:


Drosophila obatai - Unit 2 - Wailupe
Puulanipo
Kaau Crater
1000
2000
2000
1500
1500
1500
1000
1000
1000
Mauumae Ridge
Wilwilinui Ridge
Laulaupoe Gulch
Aha Aina Pl.
Hao St.
Drosophila obatai - Unit 2 - Wailupe
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

Hawaiian picture-wing fly (*Drosophila ochrobasis*)

(1) Critical habitat units are depicted for County of Hawaii, island of Hawaii, Hawaii, on the maps below.

(2) The primary constituent elements of critical habitat for *Drosophila ochrobasis* are:

(i) Mesic to wet, montane, ohia, koa, and *Cheirodendron* sp. forest between the elevations of 3,400–5,400 ft (1,035–1,645 m); and

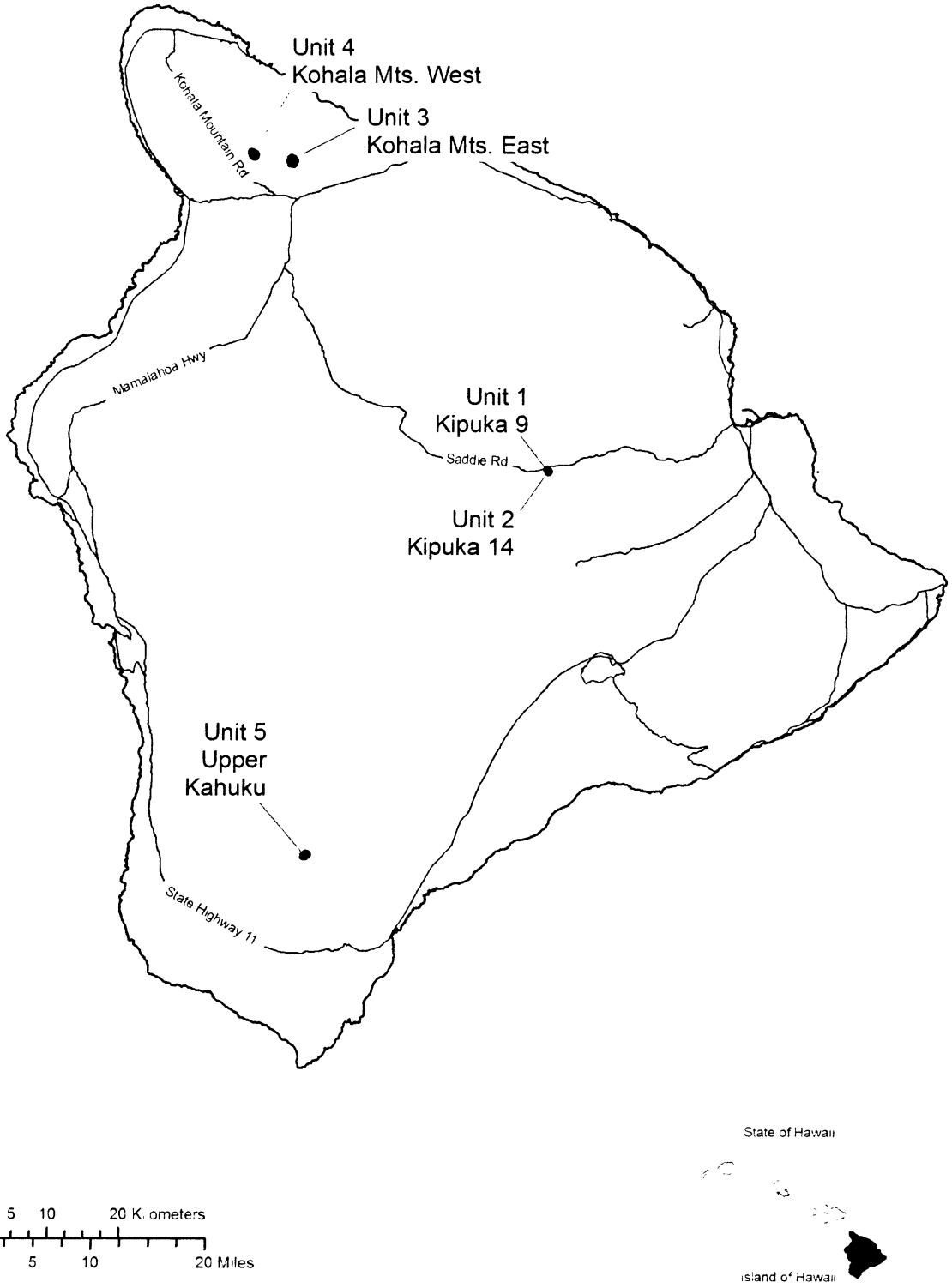
(ii) The larval host plants *Clermontia calophylla, C. clermontioides, C. clermontioides* ssp. *rockiana, C. drepanomorpha, C. hawaiiensis, C. kohalae, C. lindseyana, C. montis-loa, C. parviflora, C. peleana, C. pyrularia, C. waimeae, Marattia douglasii, Myrsine lanaiensis, M. lessertiana,* and *M. sandwicensis.*

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) Note: Index map of critical habitat units for Drosophila ochrobasis follows:

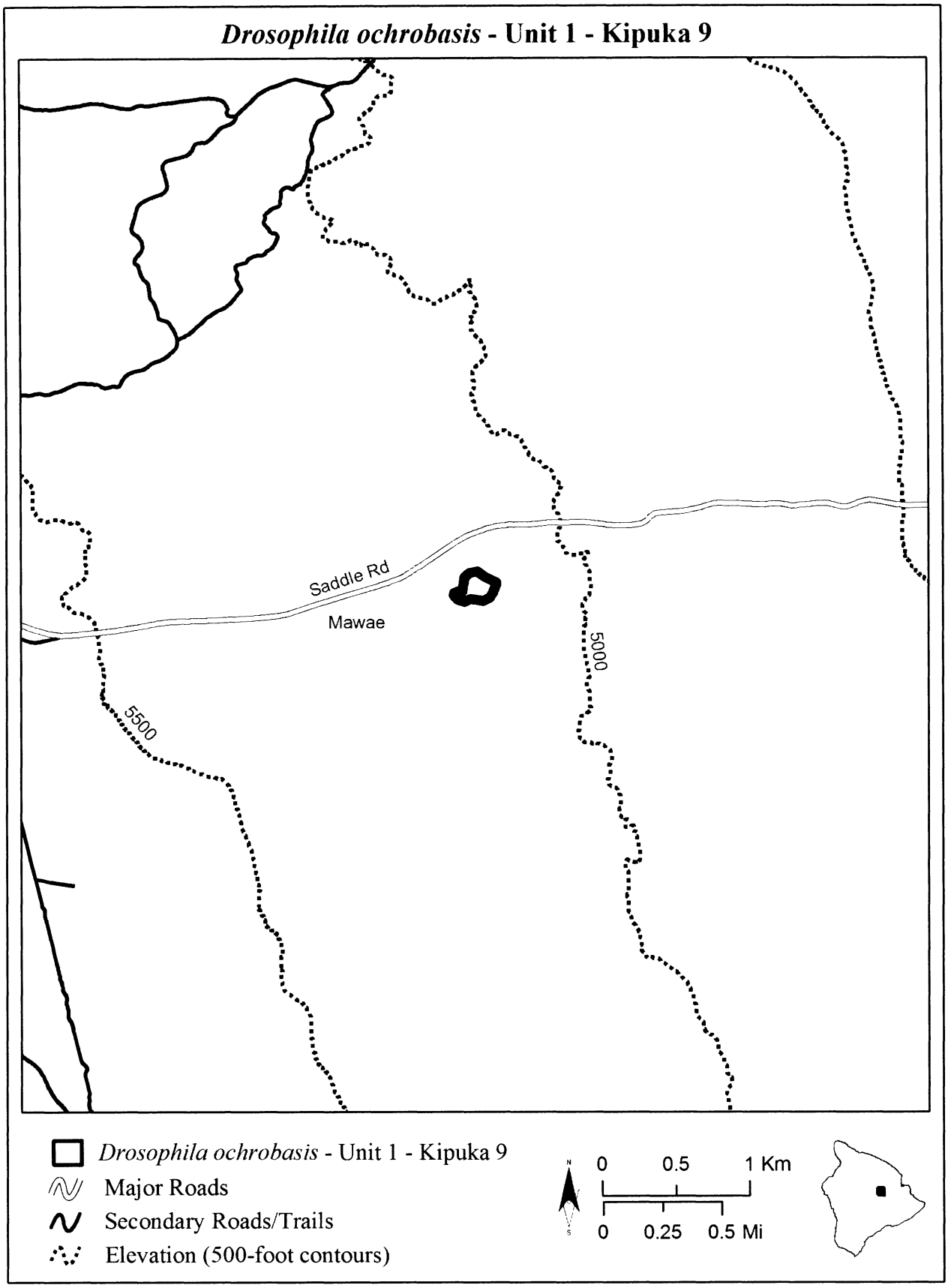
Index Map of Critical Habitat Units for - *Drosophila ochrobasis*



(6) *Drosophila ochrobasis*—Unit 1—Kipuka 9, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 884112, 2179392; 884090, 2179333; 884069, 2179303; 884023, 2179281; 883971, 2179292; 883936, 2179295; 883896, 2179273; 883855, 2179287; 883825, 2179319; 883828, 2179335; 883861, 2179349; 883869, 2179346; 883885, 2179346; 883888, 2179373; 883893, 2179409; 883896, 2179441; 883934, 2179473; 883985, 2179484; 884036, 2179444; 884112, 2179409.

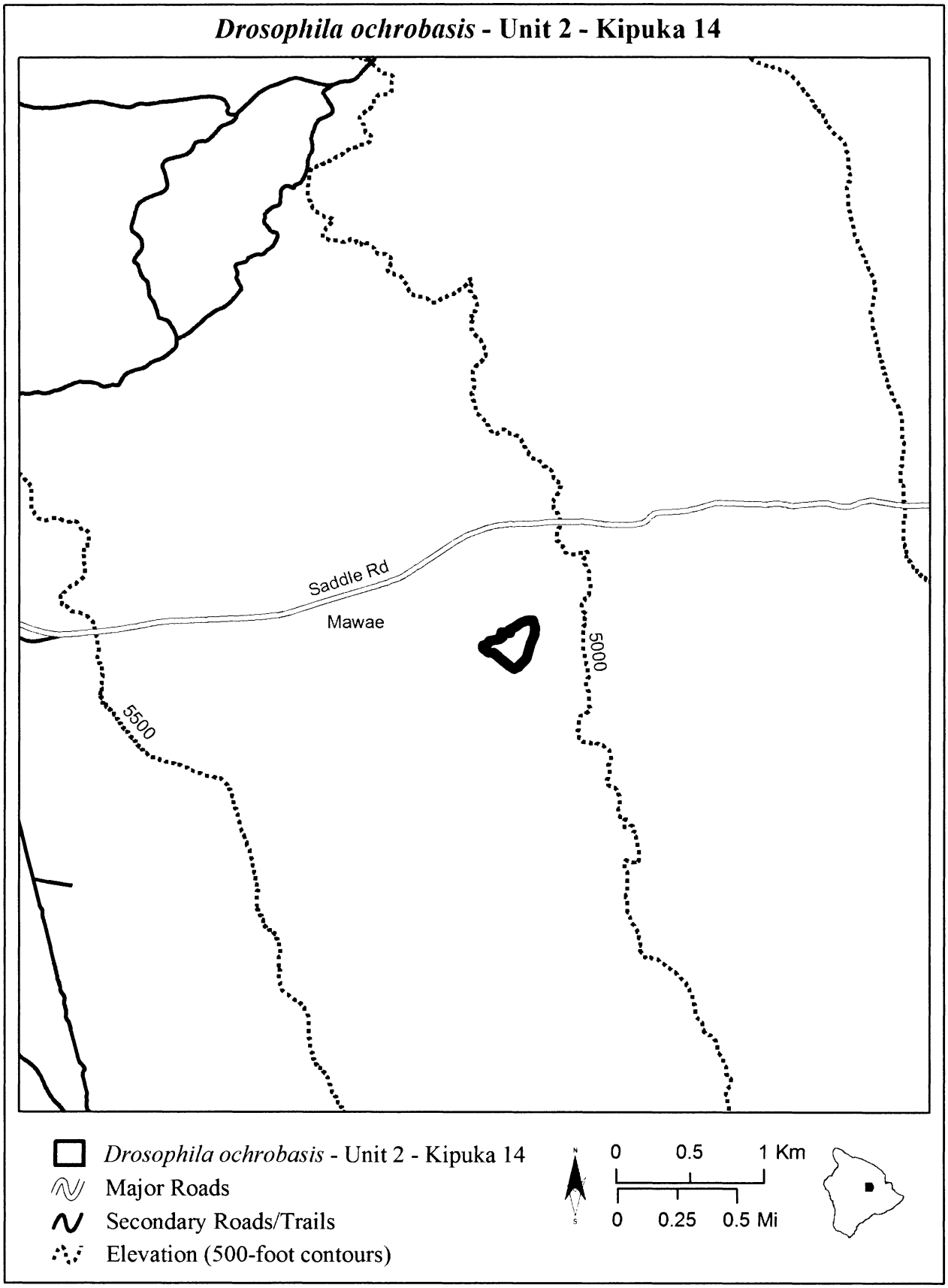
(ii) Note: Map of *Drosophila ochrobasis*—Unit 1—Kipuka 9 follows:


Drosophila ochrobasis - Unit 1 - Kipuka 9
Saddle Rd
Mawae
5000
5500
Drosophila ochrobasis - Unit 1 - Kipuka 9
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(7) *Drosophila ochrobasis*—Unit 2—Kipuka 14, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 884379, 2179103; 884375, 2179051; 884351, 2178992; 884320, 2178889; 884264, 2178832; 884236, 2178818; 884211, 2178834; 884141, 2178891; 884099, 2178924; 884064, 2178929; 884026, 2178959; 884026, 2178976; 884052, 2178983; 884071, 2179008; 884101, 2179013; 884137, 2179021; 884160, 2179035; 884148, 2179051; 884151, 2179065; 884210, 2179063; 884208, 2179084; 884242, 2179101; 884280, 2179131; 884323, 2179146; 884365, 2179146.

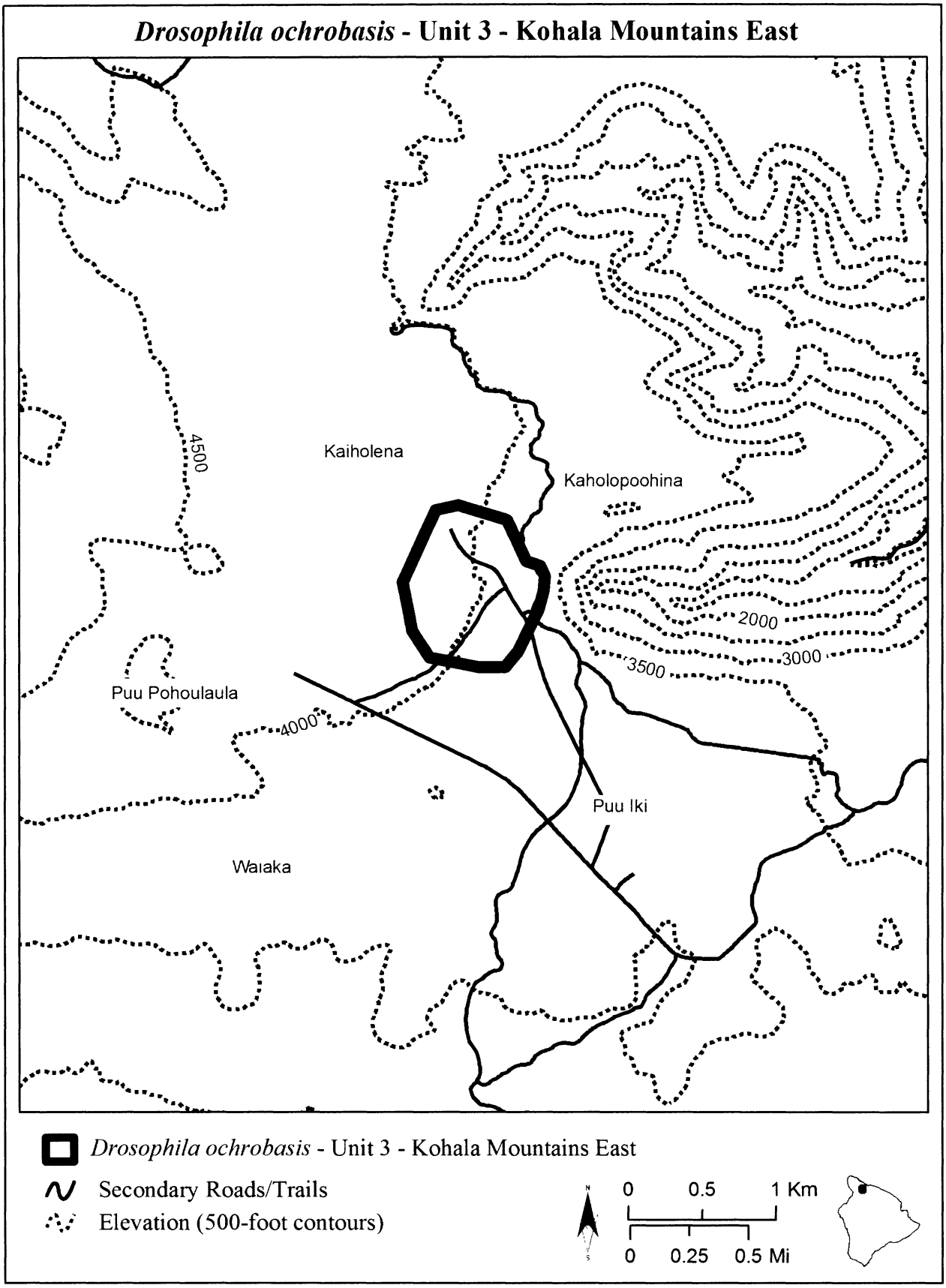
(ii) Note: Map of *Drosophila ochrobasis*—Unit 2—Kipuka 14 follows:


Drosophila ochrobasis - Unit 2 - Kipuka 14
Saddle Rd
Mawae
5000
5500
Drosophila ochrobasis - Unit 2 - Kipuka 14
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(8) *Drosophila ochrobasis*—Unit 3—Kohala Mountains East, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 848091, 2222077; 847912, 2222077; 847578, 2222142; 847461, 2222323; 847396, 2222654; 847508, 2222900; 847620, 2223146; 847773, 2223179; 848104, 2223079; 848172, 2222934; 848235, 2222798; 848327, 2222764; 848361, 2222693; 848350, 2222595; 848317, 2222476; 848177, 2222184.

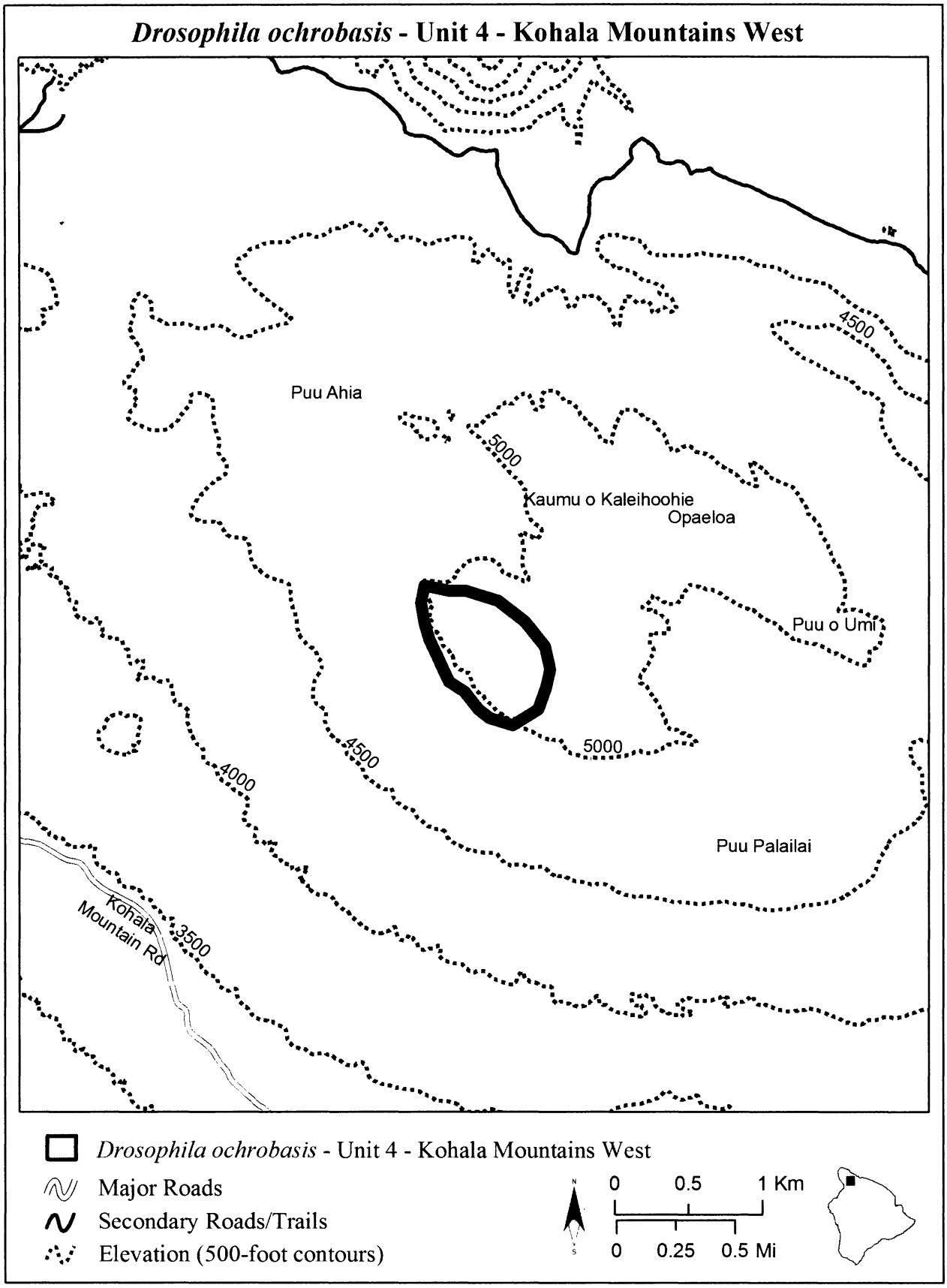
(ii) Note: Map of *Drosophila ochrobasis*—Unit 3—Kohala Mountains East follows:


Drosophila ochrobasis - Unit 3 - Kohala Mountains East
Kaiholena
Kaholopoohina
4500
2000
3000
3500
4000
Puu Pohoulaula
Puu Iki
Waiaka
Drosophila ochrobasis - Unit 3 - Kohala Mountains East
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(9) *Drosophila ochrobasis*—Unit 4—Kohala Mountains West, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 841990, 2224000; 842156, 2223966; 842268, 2223966; 842486, 2223897; 842666, 2223757; 842803, 2223586; 842840, 2223426; 842812, 2223314; 842758, 2223157; 842584, 2223047; 842430, 2223096; 842355, 2223157; 842260, 2223278; 842154, 2223345; 842020, 2223634; 841988, 2223746; 841967, 2223882.

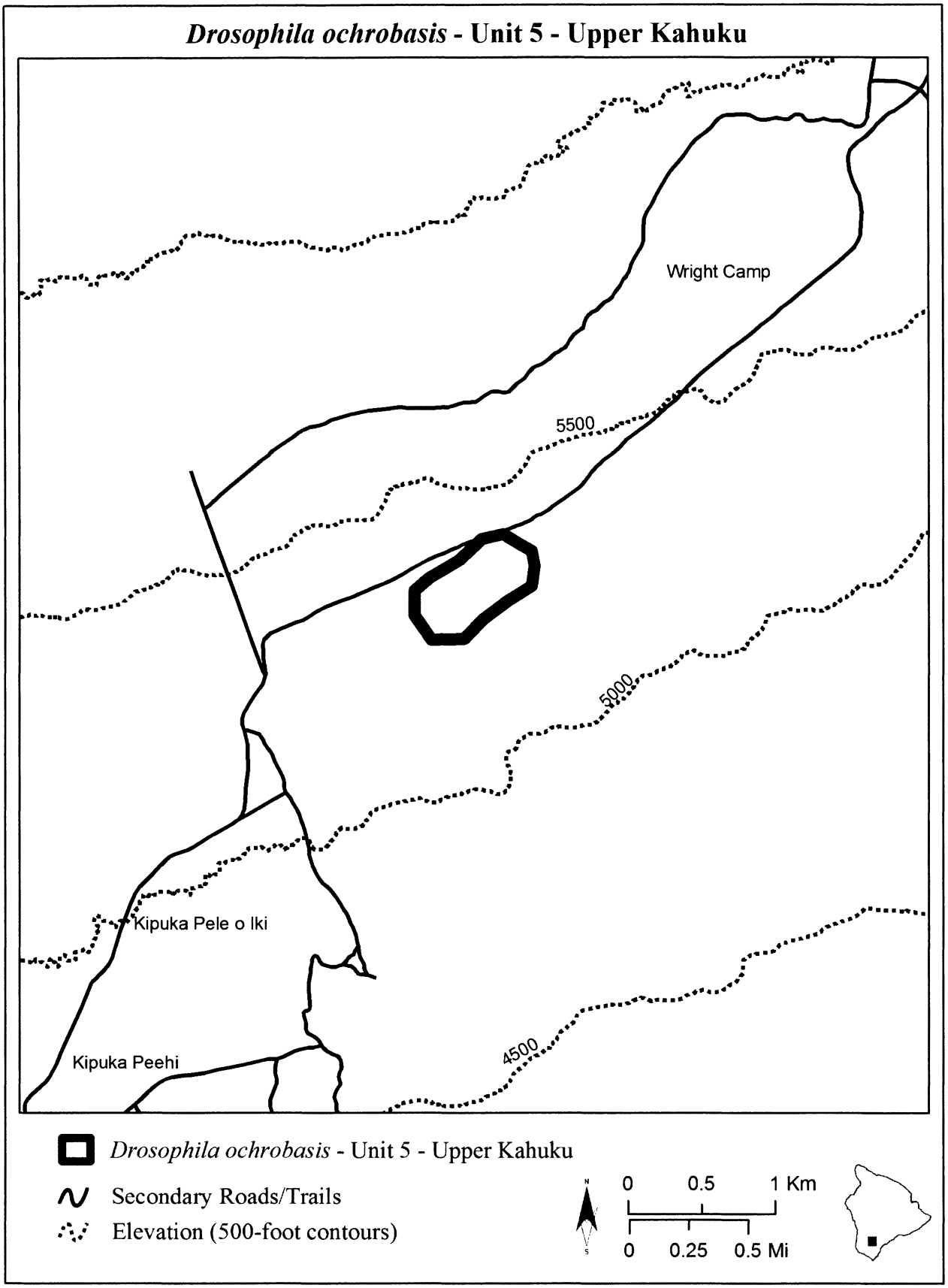
(ii) Note: Map of *Drosophila ochrobasis*—Unit 4—Kohala Mountains West follows:


Drosophila ochrobasis - Unit 4 - Kohala Mountains West
Puu Ahia
5000
4500
Kaumu o Kaleihoohie
Opaeloa
Puu o Umi
5000
4500
4000
Puu Palailai
Kohala Mountain Rd
3500
Drosophila ochrobasis - Unit 4 - Kohala Mountains West
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(10) *Drosophila ochrobasis*—Unit 5—Upper Kahuku, Hawaii County, island of Hawaii, Hawaii.

(i) Land bounded by the following coordinates: 850211, 2124185; 849989, 2124179; 849874, 2124347; 849874, 2124516; 849975, 2124603; 850177, 2124724; 850332, 2124866; 850474, 2124900; 850589, 2124832; 850669, 2124785; 850690, 2124684; 850669, 2124549; 850508, 2124448; 850339, 2124320.

(ii) Note: Map of *Drosophila ochrobasis*—Unit 5—Upper Kahuku follows:



BILLING CODE 4310–55–C

Hawaiian picture-wing flies (*Drosophila substenoptera*)

(1) Critical habitat is depicted for County of Honolulu, island of Oahu, Hawaii, on the maps below.

(2) The primary constituent elements of critical habitat for *Drosophila substenoptera* are:

(i) Mesic to wet, lowland to montane, ohia and koa forest between the elevations of 1,300–4,000 ft (395—1,220 m); and

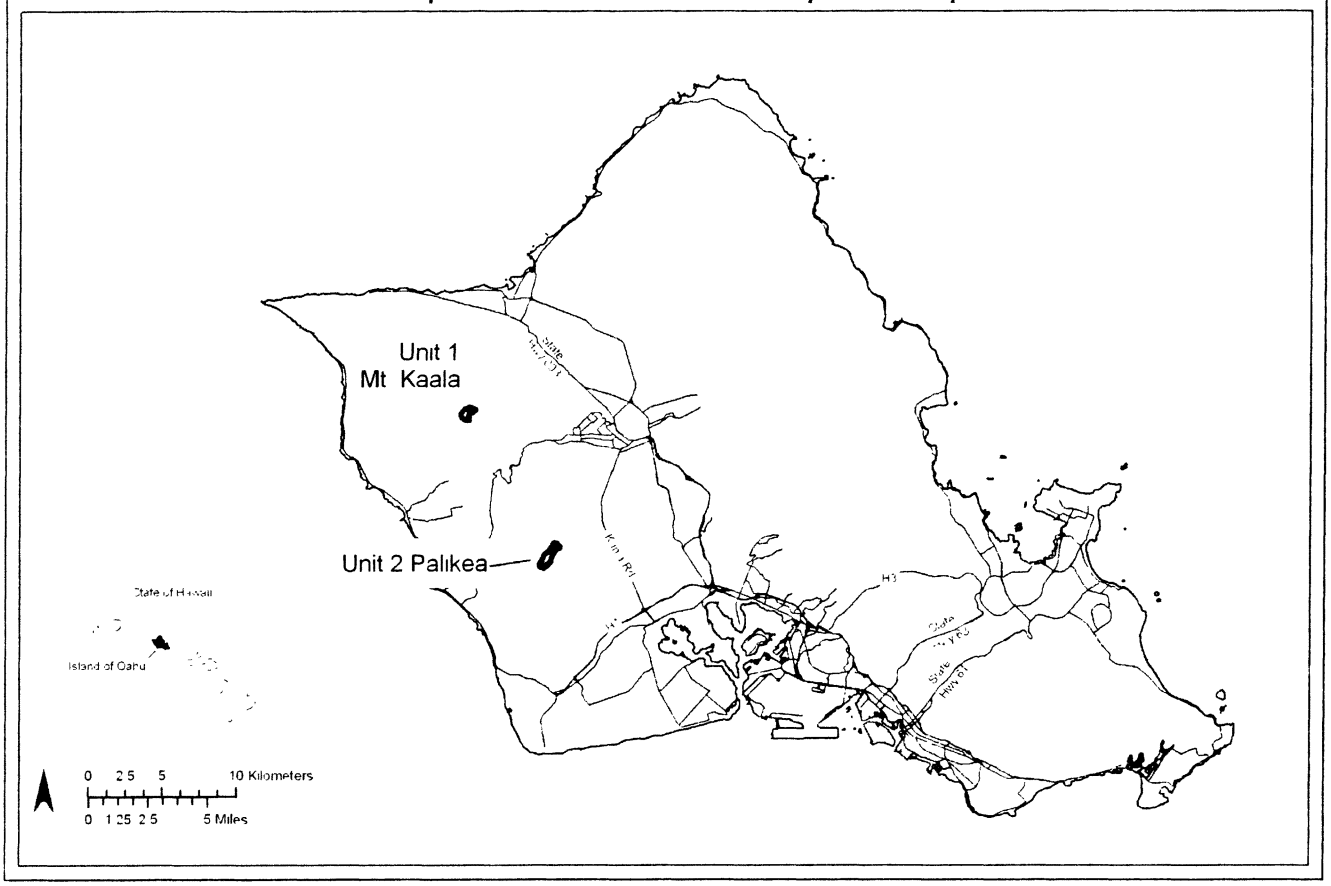
(ii) The larval host plants *Cheirodendron platyphyllum* ssp. *platyphyllum, C. trigynum* ssp. *trigynum, Tetraplasandra kavaiensis*, and *T. oahuensis*.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) Note: Index map of critical habitat units for *Drosophila substenoptera* follows:

Index Map of Critical Habitat Units for - *Drosophila substenoptera*



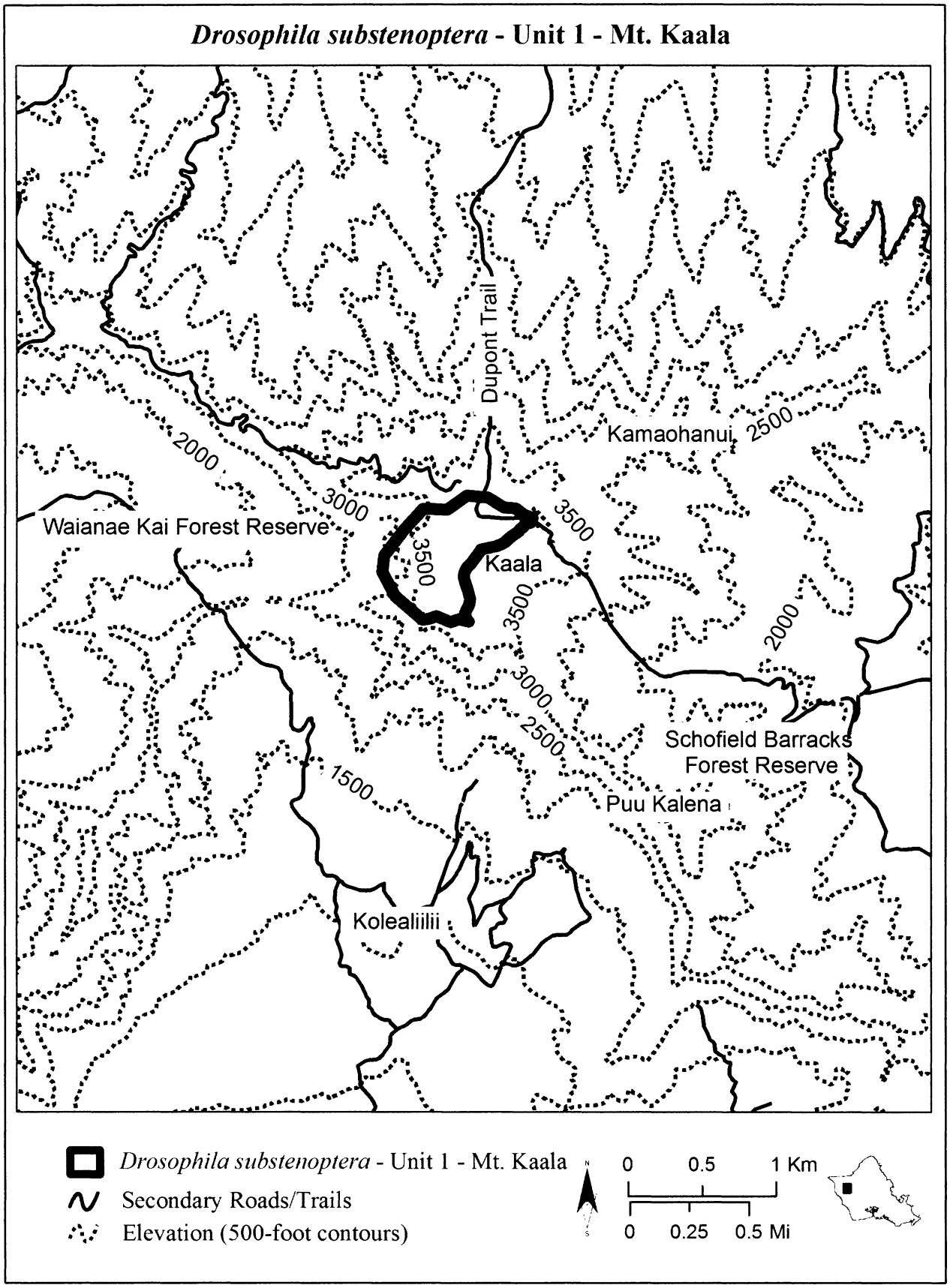
(6) *Drosophila substenoptera*—Unit 1—Mt. Kaala, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 588692, 2378661; 588740, 2378622; 588806, 2378595; 588799, 2378573; 588790, 2378564; 588785, 2378562; 588776, 2378565; 588776, 2378565; 588776, 2378565; 588776, 2378565; 588776, 2378565; 588776, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588766, 2378566; 588765, 2378566; 588765, 2378566; 588765, 2378566; 588753, 2378551; 588731, 2378529; 588722, 2378520; 588722, 2378520; 588722, 2378520; 588714, 2378509; 588660, 2378470; 588660, 2378470; 588660, 2378470; 588660, 2378470; 588617, 2378429; 588584, 2378412; 588563, 2378405; 588530, 2378398; 588530, 2378398; 588484, 2378387; 588466, 2378384; 588466, 2378384; 588466, 2378384; 588466, 2378384; 588466, 2378384; 588466, 2378384; 588466, 2378384; 588459, 2378380; 588459, 2378380; 588459, 2378380; 588459, 2378380; 588459, 2378379; 588459, 2378379; 588459, 2378379; 588459, 2378379; 588395, 2378293; 588361, 2378254; 588361, 2378254; 588361, 2378254; 588361, 2378254; 588361, 2378254; 588349, 2378234; 588349, 2378234; 588349, 2378234; 588349, 2378234; 588349, 2378234; 588349, 2378234; 588349, 2378234; 588344, 2378210; 588344, 2378210; 588344, 2378210; 588344, 2378210; 588344, 2378210; 588344, 2378210; 588344, 2378210; 588344, 2378186; 588344, 2378186; 588344, 2378186; 588344, 2378186; 588349, 2378161; 588349, 2378161; 588349, 2378161; 588349, 2378161; 588373, 2378097; 588385, 2378041; 588384, 2378026; 588380, 2378003; 588364, 2377972; 588364, 2377972; 588364, 2377972; 588351, 2377941; 588351, 2377941; 588351, 2377941; 588351, 2377941; 588351, 2377941; 588351, 2377941; 588351, 2377941; 588351, 2377941; 588351, 2377941; 588351, 2377941; 588354, 2377924; 588354,

2377924; 588354, 2377923; 588354, 2377923; 588354, 2377923; 588362, 2377904; 588362, 2377904; 588362, 2377904; 588362, 2377904; 588362, 2377904; 588369, 2377893; 588369, 2377893; 588369, 2377893; 588369, 2377893; 588369, 2377893; 588376, 2377888; 588308, 2377906; 588255, 2377885; 588156, 2377924; 588103, 2377905; 588064, 2377903; 587879, 2378062; 587792, 2378228; 587806, 2378342; 587939, 2378515; 588067, 2378659; 588232, 2378655; 588363, 2378748; 588503, 2378737; 588614, 2378668.

(ii) Note: Map of *Drosophila substenoptera*—Unit 1—Mt. Kaala follows:

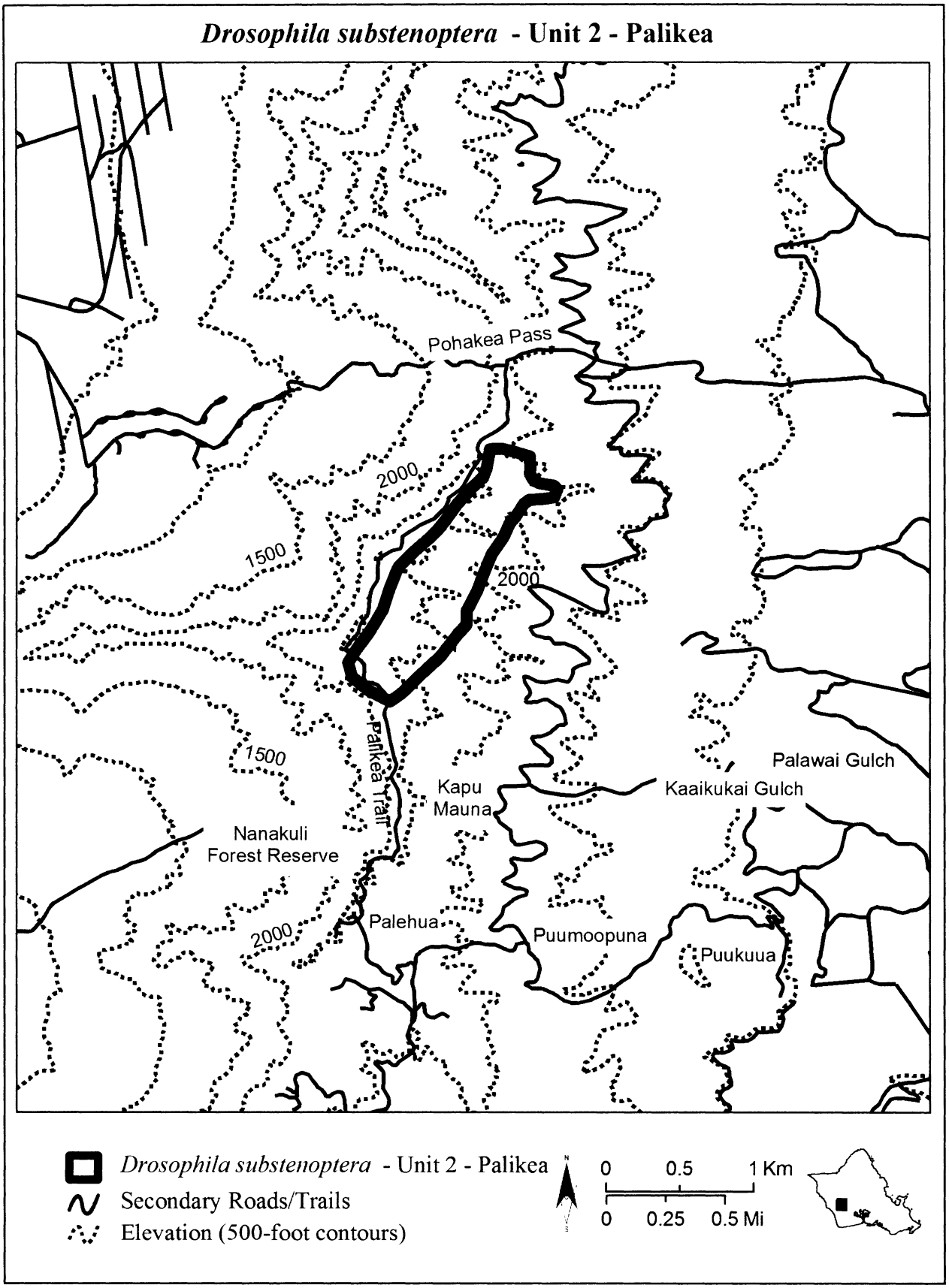
BILLING CODE 4310–55–P


Drosophila substenoptera - Unit 1 - Mt. Kaala
Dupont Trail
Kamaohanui
2500
2000
3000
3500
Waianae Kai Forest Reserve
Kaala
3500
3500
2000
3000
2500
Schofield Barracks
Forest Reserve
1500
Puu Kalena
Kolealiilii
Drosophila substenoptera - Unit 1 - Mt. Kaala
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(7) *Drosophila substenoptera*—Unit 2—Palikea, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 593529, 2367854; 593448, 2367801; 593302, 2367874; 593242, 2367927; 593193, 2367967; 593165, 2368065; 593217, 2368150; 593314, 2368283; 593399, 2368425; 593448, 2368578; 593505, 2368716; 593622, 2368833; 593703, 2368906; 593764, 2368963; 593832, 2369044; 593901, 2369145; 594002, 2369262; 594079, 2369331; 594104, 2369396; 594120, 2369485; 594124, 2369521; 594148, 2369525; 594213, 2369525; 594310, 2369497; 594395, 2369473; 594399, 2369392; 594396, 2369356; 594417, 2369313; 594461, 2369290; 594551, 2369278; 594579, 2369250; 594559, 2369197; 594472, 2369183; 594391, 2369179; 594354, 2369153; 594302, 2369072; 594257, 2369015; 594213, 2368914; 594136, 2368809; 594083, 2368672; 594035, 2368550; 593966, 2368417; 593966, 2368324; 593909, 2368259; 593792, 2368105; 593675, 2368000.

(ii) Note: Map of *Drosophila substenoptera*—Unit 2—Palikea follows:



BILLING CODE 4310–55–C

Hawaiian Picture-Wing Fly (*Drosophila Tarphytrichia*)

(1) Critical habitat units are depicted for County of Honolulu, island of Oahu, Hawaii, on the maps below.

(2) The primary constituent elements of critical habitat for *Drosophila tarphytrichia* are:

(i) Dry to mesic, lowland, ohia and koa forest between the elevations of 1,900 and 2,900 ft (580–885 m); and

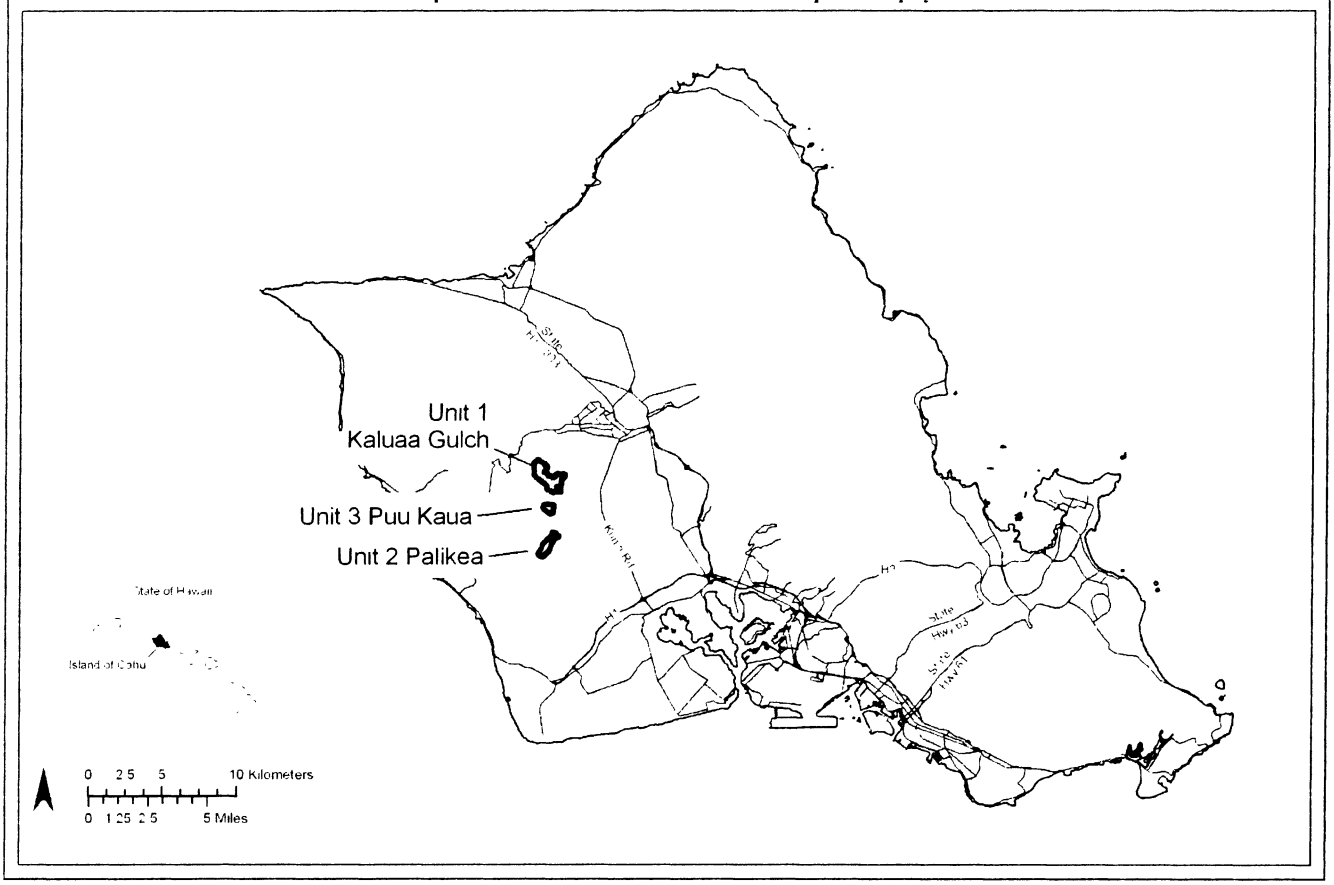
(ii) The larval host plant *Charpentiera obovata*.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, airports, and roads) and the land on which they are located existing within the legal boundaries on the effective date of this rule.

(4) Critical habitat map units. Coordinates are in Universal Transverse Mercator (UTM) Zone 4 with units in meters using North American Datum of 1983 (NAD83).

(5) Note: Index map of critical habitat units for *Drosophila tarphytrichia* follows:

Index Map of Critical Habitat Units for - *Drosophila tarphytrichia*



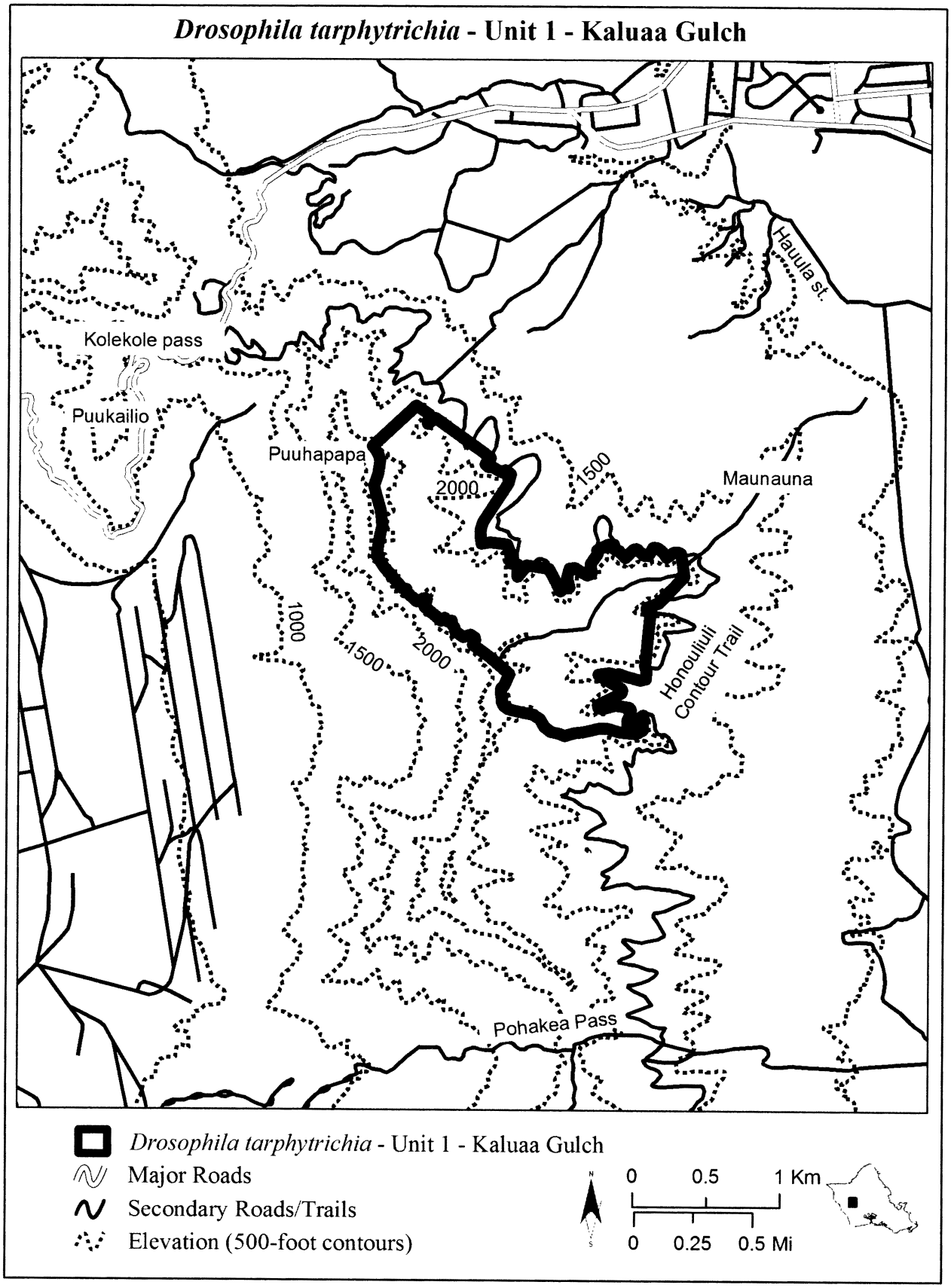
(6) *Drosophila tarphytrichia*—Unit 1—Kaluaa Gulch, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 593240, 2374436; 593231, 2374371; 593281, 2374410; 593315, 2374385; 593612, 2374173; 593656, 2374138; 593621, 2374096; 593641, 2374077; 593676, 2374072; 593703, 2374057; 593734, 2374039; 593758, 2374058; 593793, 2374029; 593779, 2373964; 593731, 2373894; 593660, 2373784; 593609, 2373702; 593592, 2373648; 593592, 2373594; 593598, 2373553; 593657, 2373561; 593770, 2373549; 593792, 2373496; 593797, 2373417; 593842, 2373411; 593842, 2373326; 593905, 2373404; 594053, 2373383; 594103, 2373292; 594134, 2373228; 594156, 2373250; 594194, 2373256; 594178, 2373323; 594196, 2373386; 594229, 2373390; 594312, 2373340; 594341, 2373350; 594339, 2373421; 594383, 2373487; 594381, 2373513; 594460, 2373552; 594496, 2373553; 594497, 2373518; 594526, 2373509; 594572, 2373460; 594632, 2373519; 594649, 2373523; 594699, 2373475; 594728, 2373476; 594762, 2373532; 594791, 2373529; 594828, 2373501; 594852, 2373465; 594903, 2373501; 594933, 2373500; 594952, 2373489; 594974, 2373334; 594800, 2373150; 594718, 2373120; 594718, 2373102; 594744, 2373091; 594710, 2372721; 594720, 2372686; 594716, 2372633; 594678, 2372623; 594566, 2372651; 594536, 2372666; 594506, 2372663; 594467, 2372672; 594395, 2372663; 594406, 2372650; 594546, 2372567; 594558, 2372553; 594551, 2372535; 594389, 2372452; 594395, 2372434; 594415, 2372428; 594511, 2372449; 594603, 2372437; 594614, 2372421; 594607, 2372385; 594593, 2372353; 594591, 2372317; 594618, 2372322; 594661, 2372357; 594700, 2372384; 594696, 2372334; 594697, 2372333; 594697, 2372283; 594652, 2372257; 594541, 2372266; 594454, 2372294; 594400, 2372294; 594293, 2372267; 594231, 2372261; 594168, 2372241; 594126, 2372258; 594075, 2372267; 594030, 2372303; 593999, 2372354; 593948, 2372388; 593889, 2372397; 593812, 2372413; 593781, 2372425; 593756, 2372442; 593742, 2372467; 593742, 2372490; 593736,

2372521; 593736, 2372560; 593757, 2372587; 593790, 2372662; 593663, 2372772; 593543, 2372859; 593558, 2372894; 593555, 2372910; 593526, 2372928; 593476, 2372912; 593422, 2372953; 593420, 2372976; 593403, 2372997; 593400, 2373025; 593373, 2373016; 593352, 2373044; 593328, 2373025; 593215, 2373118; 593230, 2373171; 593214, 2373176; 593163, 2373154; 593095, 2373213; 593091, 2373238; 593064, 2373243; 593019, 2373295; 592937, 2373388; 592889, 2373462; 592897, 2373535; 592908, 2373597; 592923, 2373668; 592914, 2373772; 592889, 2373866; 592868, 2373941; 592867, 2373950; 592894, 2374029; 592908, 2374120; 592894, 2374162; 592860, 2374213; 592854, 2374216; 593151, 2374494.

(ii) Note: Map of *Drosophila tarphytrichia*—Unit 1—Kaluaa Gulch follows:

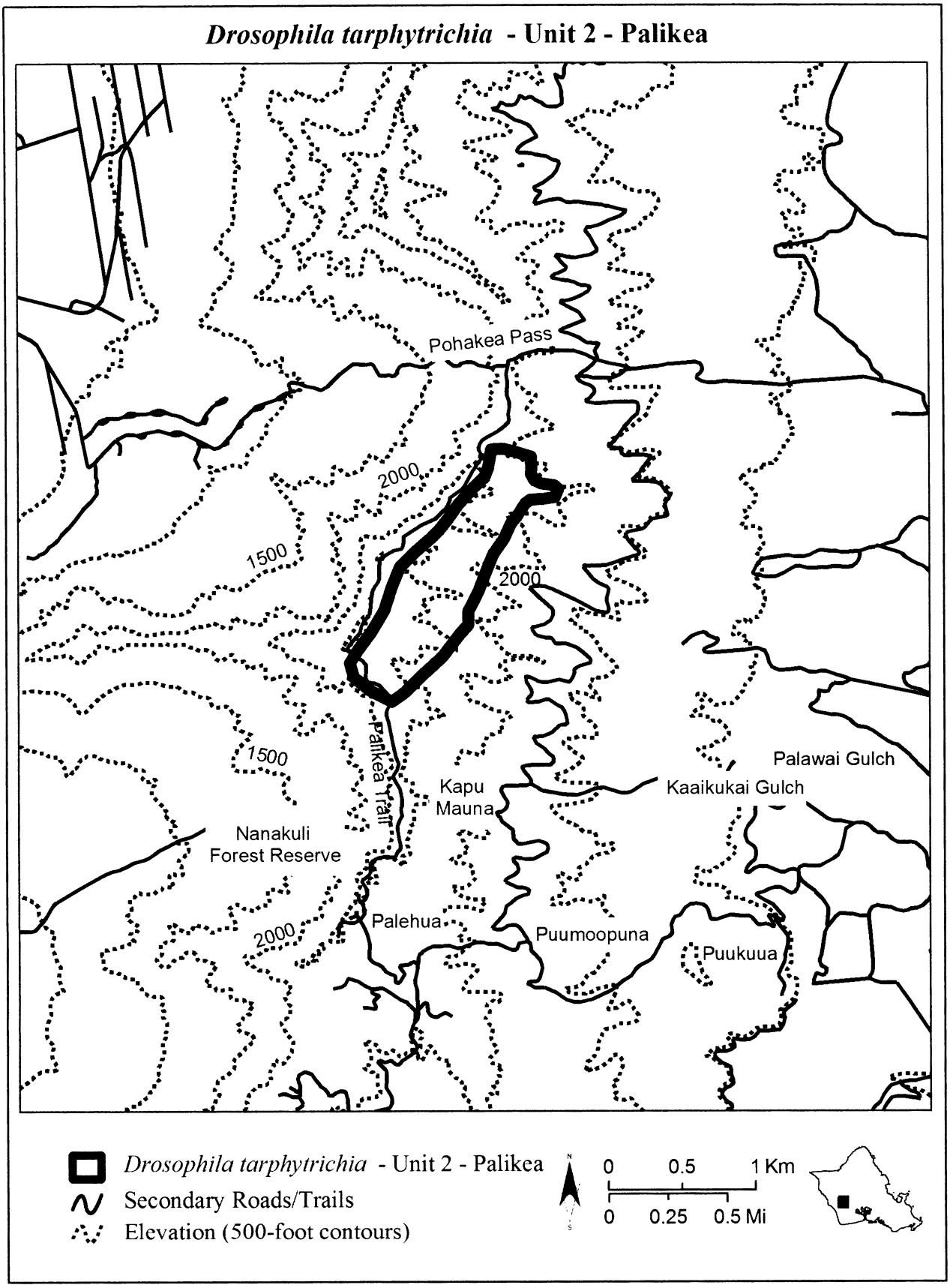
BILLING CODE 4310–55–P


Drosophila tarphytrichia - Unit 1 - Kaluaa Gulch
Kolekole pass
Puukailio
Puuhapapa
2000
1500
Maunauna
Hauula st.
1000
1500
2000
Honouliuli Contour Trail
Pohakea Pass
Drosophila tarphytrichia - Unit 1 - Kaluaa Gulch
Major Roads
Secondary Roads/Trails
Elevation (500-foot contours)
0 0.5 1 Km
0 0.25 0.5 Mi

(7) *Drosophila tarphytrichia*—Unit 2—Palikea, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 593529, 2367854; 593448, 2367801; 593302, 2367874; 593242, 2367927; 593193, 2367967; 593165, 2368065; 593217, 2368150; 593314, 2368283; 593399, 2368425; 593448, 2368578; 593505, 2368716; 593622, 2368833; 593703, 2368906; 593764, 2368963; 593832, 2369044; 593901, 2369145; 594002, 2369262; 594079, 2369331; 594104, 2369396; 594120, 2369485; 594124, 2369521; 594148, 2369525; 594213, 2369525; 594310, 2369497; 594395, 2369473; 594399, 2369392; 594396, 2369356; 594417, 2369313; 594461, 2369290; 594551, 2369278; 594579, 2369250; 594559, 2369197; 594472, 2369183; 594391, 2369179; 594354, 2369153; 594302, 2369072; 594257, 2369015; 594213, 2368914; 594136, 2368809; 594083, 2368672; 594035, 2368550; 593966, 2368417; 593966, 2368324; 593909, 2368259; 593792, 2368105; 593675, 2368000.

(ii) Note: Map of *Drosophila tarphytrichia*—Unit 2—Palikea follows:

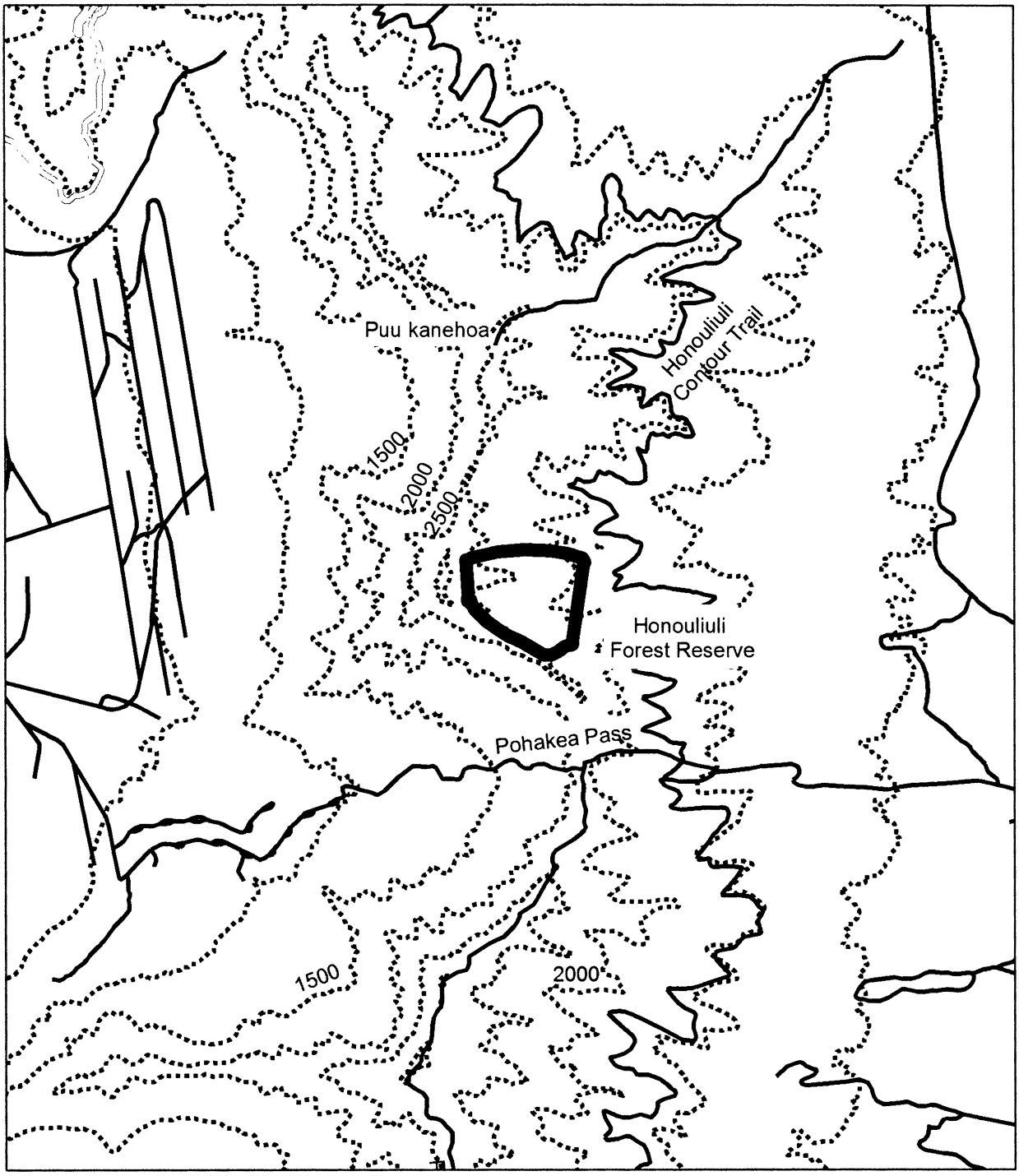

Drosophila tarphytrichia - Unit 2 - Palikea
Pohakea Pass
2000
1500
2000
1500
Palikea Trail
Kapu Mauna
Palawai Gulch
Kaaikukai Gulch
Nanakuli Forest Reserve
Palehua
2000
Puumoopuna
Puukuua
Drosophila tarphytrichia - Unit 2 - Palikea
Secondary Roads/Trails
Elevation (500-foot contours)
N
S
0 0.5 1 Km
0 0.25 0.5 Mi

(8) *Drosophila tarphytrichia*—Unit 3—Puu Kaua, City and County of Honolulu, island of Oahu, Hawaii.

(i) Land bounded by the following coordinates: 594166, 2370854; 594166, 2370853; 594164, 2370854; 594122, 2370843; 594090, 2370815; 594040, 2370789; 593996, 2370789; 593930, 2370827; 593852, 2370875; 593778, 2370907; 593716, 2370947; 593642, 2370999; 593602, 2371041; 593574, 2371067; 593558, 2371095; 593539, 2371118; 593531, 2371121; 593534, 2371173; 593519, 2371375; 593533, 2371375; 593552, 2371390; 593628, 2371404; 593716, 2371426; 593794, 2371431; 593876, 2371437; 593974, 2371435; 594036, 2371431; 594138, 2371415; 594190, 2371399; 594232, 2371385; 594246, 2371359; 594239, 2371354; 594170, 2370879; 594172, 2370877; 594170, 2370855.

(ii) Note: Map of *Drosophila tarphytrichia*—Unit 3—Puu Kaua follows:

***Drosophila tarphytrichia* - Unit 3 - Puu Kaua**



Drosophila tarphytrichia - Unit 3 - Puu Kaua
Secondary Roads/Trails
Elevation (500-foot contours)

0 0.5 1 Km
0 0.25 0.5 Mi

BILLING CODE 4310–55–C

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Dated: November 2, 2007.

David M. Verhey,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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