

# Unwanted Card

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## **Unwanted: Brown tree snake (*Boiga irregularis*)**

Brown tree snakes are native to the South Pacific ranging from the Solomon Islands across the island of New Guinea to East Indonesia, down to Cape York and eastern Australia. In their native habitat their populations are kept in balance by parasites and predators such as hawks, other snakes, and insects that eat their eggs. Brown tree snakes can be up to 10 feet (3 m) in length. They are greenish-brown and scaly, with bulging eyes.

**How they could invade:** They have been found in Hawai'i seven times (both dead and alive), coming in on aircraft from Guam; they could also arrive via ship.

**Threat:** These snakes pose a major threat to Hawai'i. In Guam, they are responsible for:

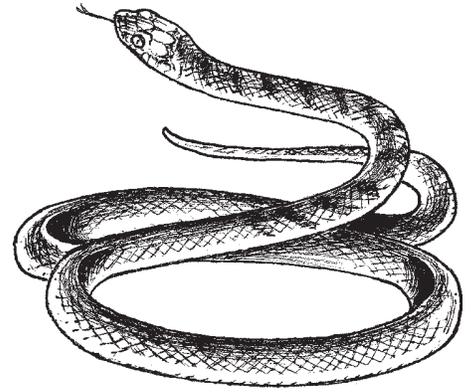
- Regular power outages that are inconvenient and costly to fix.
- More than 200 snakebites (most people were bitten at night in their beds).
- The loss of forest birds, bats, chickens, puppies, kittens and other small animals (9 of Guam's 11 native bird species and most of their non-native birds are now extinct on the island).

One pregnant female slipping past inspection could establish a population here.

**Prevention:** Provide funding for more inspectors to inspect all aircraft and ships before leaving Guam and upon arriving in Hawai'i. Train teams to search for invading snakes near harbors and airports and to control snakes in high-risk areas.

**Note: There are many other kinds of snakes that pose a threat to Hawai'i. The sighting of any snake or other pest should be reported to the Hawai'i State Dept. of Agriculture. Call ASK-2000 (275-2000) to get the phone number you need.**

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## **Unwanted: Africanized honey bees (killer bees) (*Apis mellifera scutellata*)**

These bees are hybrids created by people in Brazil who crossed European honey bees with bees from Africa.

**How they could invade:** As stowaways aboard ships. Killer bees are spreading rapidly in the southern U.S.; they reached California in 1995.

**Threat:** These are very aggressive honey bees.

- In Latin America, killer bees have caused nearly 1,000 human deaths and an estimated 200,000 attacks that required people to see a doctor.
- They are a major threat to human safety, especially for native Hawaiians and others who are very sensitive to bee stings.
- They are a threat to the environment since they could compete with native bees that many native plants depend on for pollination.
- The presence of killer bees could hurt tourism.

**Prevention:** People need to be made more aware of the threat. Increase funding for more inspectors of incoming ships.

**Note: In 1995 there were only 133 state and federal inspectors and 10 dogs to inspect 25,000 flights, 6 million tons of cargo, and nearly 8 million visitors and residents coming to Hawai'i.**



# Unwanted Card

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## Unwanted: Malaria-carrying mosquitoes (*Anopheles species*)

These mosquitoes are native to many areas of the world, but not Hawai'i. In their native habitats populations are controlled by insects and by fish that eat their larvae.

**How they could invade:** Larvae could arrive in wet cargo containers carried by ships or private boats.

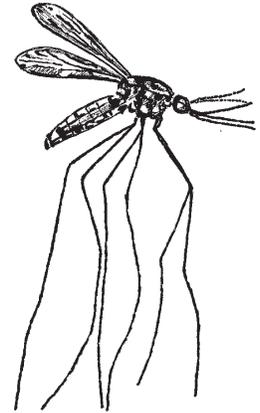
Adults could arrive in aircraft cargo. They spread more rapidly than most mosquitoes, so they would be difficult to get rid of.

**Threat:** No human malaria-carrying mosquitoes are in Hawai'i now.

- If just one pregnant mosquito arrived in Hawai'i, it could start a malaria epidemic by biting people who already carry the disease and spreading it to others. An infected mosquito arriving in the Islands is even more of a threat.
- People would need to get malaria shots or take pills.
- Controlling an outbreak of the disease would be difficult.
- The presence of malaria-carrying mosquitoes in the Islands would also have a negative impact on the tourism industry.

**Prevention:** Increase funding for more inspectors and equipment to inspect all aircraft and ships and provide more public education. When coming to Hawai'i, don't bring plants, fruits, vegetables, soil or illegal animals into the Islands. Spread the word to others about the importance of not bringing these things into Hawai'i.

**Note: The Health Dept. has collected 104 different species of mosquitoes that arrived in Honolulu on jets.**



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## Unwanted: Queensland fruit fly (*Bactrocera tyroni*)

These fruit flies are native to Australia where their populations are controlled by other insects, parasites and diseases.

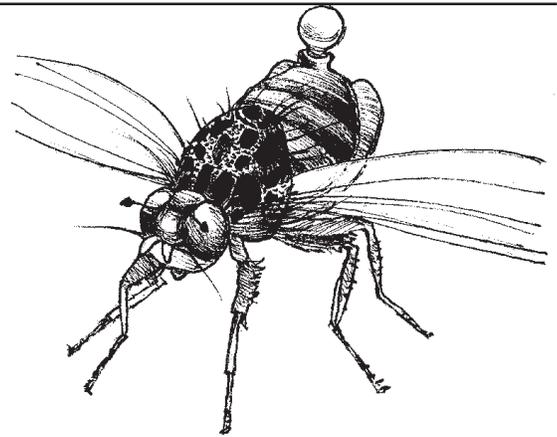
**How they could invade:** On fruits and vegetables being shipped in from Australia.

**Threat:** The fruit flies that have already made their way to Hawai'i have limited our export of papaya, mango and other fruits to California and Japan where they are trying to keep these flies out. This causes farmers of Hawai'i to lose an estimated \$300 million per year in potential income.

- The Queensland fruit fly feeds on a wide variety of crops so it could limit more exports and cause loss of additional income to farmers.
- Fruit fly damage to crops could also mean higher prices for consumers.
- Additional fruit flies may cause farmers to increase pesticide use.

**Prevention:** More inspectors are needed to check produce leaving Australia and again when it arrives in Hawai'i.

**Note: A new pest reaches Hawai'i once every 18 days on average.**



# Unwanted Card

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## Unwanted: Fire ants (*Solenopsis invicta*)

Fire ants are native to South America where their populations are controlled by parasites and diseases.

**How they could invade:** In mail or cargo in ships or aircraft. Fire ants were found at the Honolulu post office in a package from Florida in 1991. The ants were destroyed.

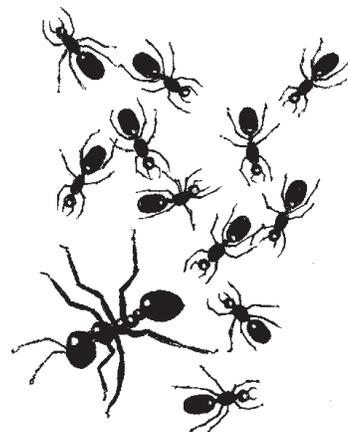
**Threat:** The risk of fire ants invading Hawai'i is high. They can:

- Cause allergic reactions and death in humans; in 1989, 20,000 people in the southern U.S. went to the doctor for fire ant stings; 32 died.
- Kill beneficial farm insects, damage many crop seeds, flowers and fruits.
- Kill ground-nesting birds, small animals and even trees.
- Gnaw through drip irrigation hoses on farms, lawns and golf courses.

**Prevention:** State and federal inspectors need trained dogs, equipment and the authority to inspect suspicious mail packages. Currently, inspectors can open packages marked "*Plant Material*." Increased inspectors for all incoming ships and aircraft are needed. People need to be made aware of the threat. Ask friends and relatives not to send you plants or animals through the mail.

**Note:** *People have spread crop pests by sharing diseased plants with friends. Check with the Hawai'i*

*Department of Agriculture before sending or carrying plants to another island.*



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# Unwanted Card

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## Unwanted: Piranha (*Serrasalmus species*)

These flesh-eating, freshwater fish are from the Amazon. In their native habitat their populations are kept in balance by parasites and large predators that eat their eggs.

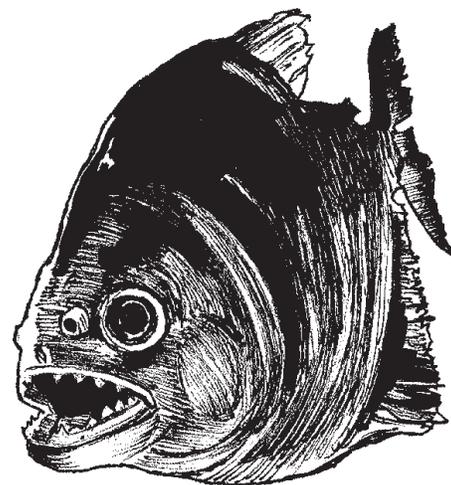
**How they could invade:** People order piranhas illegally through the mail from *dangerous pet dealers* on the Mainland. In 1992, quarantine officers confiscated 39 piranhas coming in through the mail.

**Threat:** Piranhas are a major threat to Hawai'i:

- An inspector was bitten by an illegal piranha and required 14 stitches to close the wound.
- Two piranhas have been found in O'ahu's waterways. If more of these dangerous pets are released to streams or lakes and not caught, they could make swimming a dangerous experience. They would also scare tourists.

**Prevention:** People need to be made aware of the danger of bringing these fish into the Islands. Penalties for people who bring these illegal animals to Hawai'i need to be enforced. And the court system needs to be made more aware of the seriousness of the problem so that stiff penalties will be given to those who bring in dangerous animals.

**Note:** *Federal agents inspect Hawai'i's mail bound for California, but Mainland mail is not inspected before being delivered in Hawai'i. Inspectors need trained dogs, equipment and authority to inspect suspicious parcels. (They have authority to inspect parcels with plants but not with animals.)*



# Unwanted Card

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## **Unwanted: Biting sand flies (*no-no's*) and midges (*Lycoconops, Simulium, and others*)**

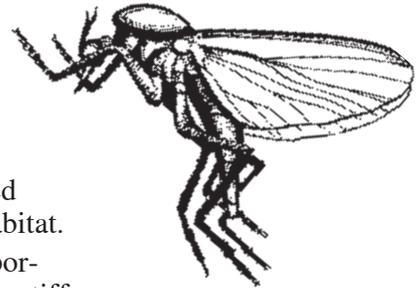
**How they could invade:** The most likely way these small insects could reach the Islands is in uninspected private boats or planes carrying illegal soil and plant material containing breeding flies.

**Threat:** Biting sand flies (*no-no's*) nearly arrived in Hawai'i via open-hulled canoes in 1995. Different species of these flies breed in beach sand or streams in many areas of the world.

- In their peak swarm, these flies can inflict 1,000 to 10,000 bites per person per day on fully exposed skin.
- The flies could devastate the tourist industry. Resorts in Tahiti, the Caribbean and the Marquesas have suffered loss of business because of the flies.
- If the flies reach the Islands, drastic control efforts would be needed such as poisoning them or plowing beaches to destroy breeding habitat.

**Prevention:** Educate people about the threat of these flies and the importance of not carrying plants or soil on private boats and planes. Enforce stiff penalties if people bring in illegal soil and plant material.

**Note: People have introduced approximately 4,600 plant species to the Hawaiian Islands. Eight hundred of these species have become naturalized and more than 80 are serious pests.**



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# Unwanted Card

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## **Unwanted: Any new termite.**

There are 2,000 species of termites in the world. In the Pacific, many species are native to Indonesia; none are native to Hawai'i. Four species of termites have been introduced to Hawai'i.

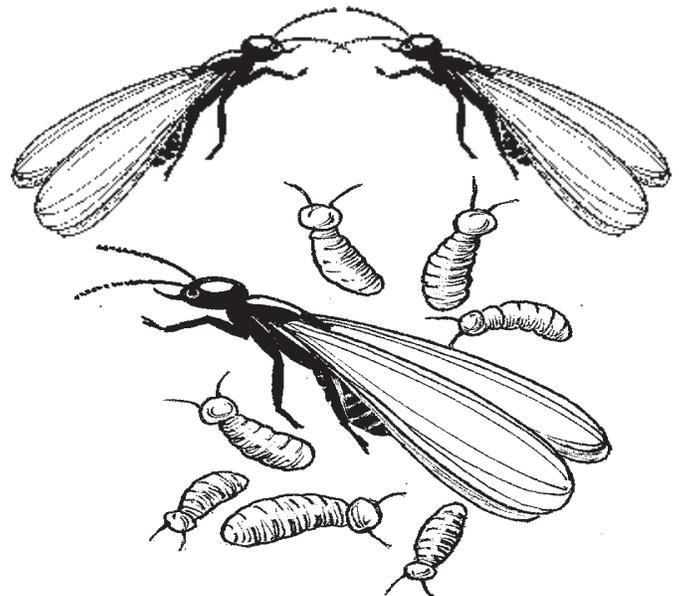
**How they could invade:** In cargo on ships or aircraft. Very destructive kinds of termites are found in Guam, Arizona, northern Japan and other areas that send people and goods to Hawai'i every day.

**Threat:** Termites already in Hawai'i cause \$150 million in treatment and repair costs each year.

- The introduction of new termites will increase damage to buildings and add to our costs for treatment and repair.

**Prevention:** Increase the number of inspectors for ships and aircraft. Spread the word about not bringing soil or plant materials into Hawai'i.

**Note: Each year, an average of 20 new insects make their way to Hawai'i, half of these are known pests.**



# Unwanted Card

## Unwanted: *Miconia* (*Miconia calvescens*)

*Miconia* trees can grow up to 50 ft (15 m) tall; their oval-shaped leaves are purple underneath and can grow up to 3 ft (1 m) long.

**How it could invade:** It already has! *Miconia* is an unwanted tree from Central and South America that was brought in as a garden plant. In its native habitat it is kept in balance by fungi and a variety of insects that are not found in Hawai'i. *Miconia* has invaded the Big Island, Maui, O'ahu and Kaua'i.

**Threat:** This pest species has already destroyed 70 percent of the native forest in Tahiti by shading out native plants.

- *Miconia* shades out and kills plants in native forests and farms.
- It increases erosion by killing groundcover plants.
- Since one plant produces millions of tiny seeds, it spreads quickly and is difficult to contain.

**Prevention:** To prevent this unwanted pest from spreading, there are a number of things you can do. Learn to recognize the plant and if you spot it, call the hotline on your island to report it. Prevent *miconia* from spreading by cleaning the bottom of your shoes or boots if you've hiked where *Miconia* grows. Volunteer to help get rid of *Miconia*. Call your local Department of Land and Natural Resources to volunteer.



### Hotline Numbers:



- Big Island ..... 961-3299
- Maui ..... 984-8100 (984-8107 after hrs.)
- Lāna'i ..... 565-7430
- Moloka'i ..... 553-5236
- O'ahu ..... 973-9541
- Kaua'i ..... 241-3411 (241-3736 after hrs.)

**Note: A single *miconia* tree about 30 ft (10 m) tall will produce approximately three million seeds two or three times each year!**