

Mongabay Series: [Global Palm Oil](#)

## Bornean bearded pigs seen adapting to oil palm habitats, study finds

by Basten Gokkon on 8 March 2018



- Bornean bearded pigs appear to thrive in oil palm plantations, but remain heavily dependent on nearby forests as their primary habitat, a recent study indicates.
- The findings are crucial because of the species' key role as an "ecosystem engineer," controlling the spread of tree species and turning over the soil with their rooting behavior.
- The researchers have called on the Malaysian government to better protect these forests in a bid to ensure a sustainable population of bearded pigs in mixed forest-oil palm areas.

Bearded pigs in Malaysian Borneo appear to have adapted to oil palm plantations, a key driver of deforestation in the region, but still depend heavily on adjacent forests as their primary habitat, a recent study suggests.

The paper, published Feb. 27 in the journal *Wildlife Research*, described the findings of surveys conducted between February and April 2014 in landscapes surrounding Danau Girang Field Centre in the Lower Kinabatangan area of eastern Sabah state. The site included 10 protected areas, ranging in size from 12 to 74 square kilometers (4.6 to 28.5 square miles), but 48 percent of the territory was occupied by oil palm plantations.

The study found that populations of the Bornean bearded pig (*Sus barbatus*) were present in all forested sites and 80 percent of the surveyed oil palm plantations, but that the animals were engaged in far more activities, such as wallowing and nesting, in the forests than the plantations.



A small group of bearded pigs looking for roots in the Lower Kinabatangan Wildlife Sanctuary. Bearded pigs are consistently present in both degraded forest fragments and adjacent oil palm plantations in the Kinabatangan area, but use forests much more often and for more behaviors. Photo courtesy of Danau Girang Field Centre (DGFC).

The researchers noted that 95 percent of the bearded pigs in the study were considered to be in "good" or "very good" physical condition.

"Consistent bearded pig presence in oil palm is potentially an indication of successful adaptation to agricultural expansion in the study area," said lead author Kieran Love from the Danau Girang Field Centre. "The apparently good body condition displayed by the vast majority of pigs in our study likely results from year-round cross-border fruit subsidies from surrounding oil palm plantations."

Oil palm plantations have become a dominant landscape in Southeast Asia, particularly in Malaysia and Indonesia, which share the island of Borneo and supply nearly 90 percent of the world's palm oil. But the rapid growth of the industry has resulted in rampant deforestation across the region.

Habitat destruction and fragmentation, as well as overhunting, have slashed the population of the bearded pig, a species of high ecological, social and conservation importance. The pigs serve as "ecosystem engineers" by removing saplings to build nests, turning over the soil through their rooting behavior, and acting as seed predators for many rainforest tree species. They are also an important prey for large predators, including the Sunda clouded leopard (*Neofelis diardi*).

Bearded pigs feed largely on leaves, roots, fungi, invertebrates, small vertebrates and carbon, but their cycles of body condition, growth and breeding have been linked mainly to the availability of fruits, including oil palm fruit.

"Our research aimed to understand how the bearded pig is adapting to increasingly common fragmented forests bordering oil palm, in an effort to establish foundational data for science and sustainable management of this popular game species in Sabah," said Benoit Coosmans, director of the Danau Girang Field Centre and scientific adviser to the Sabah Wildlife Department.

The researchers said they had started a long-term study in which individual pigs would be fitted with GPS collars, in order to better understand the pigs' movements within, and their use of, the oil-palm landscape.

They also called on the Malaysian government to include protection of secondary forest fragments adjacent to oil palm plantations in their priorities for conservation, to ensure a sustainable population of bearded pigs in mixed forest-oil palm areas.

"The fact that we have well-fed bearded pigs throughout a fragmented forest-oil palm landscape shows that there may be several options for long-term bearded pig management, which is good news for both hunters and conservationists," said corresponding author David Kurz, a doctoral candidate at the University of California, Berkeley.



An oil palm plantation adjacent to tropical forest in Malaysian Borneo. Photo by Brett A. Butler.

The bearded pig, notable for its facial hair and with a longer snout and legs than the Eurasian wild boar, is a protected species in Sabah, but can be hunted with a license. It is listed as vulnerable by the IUCN.

A study published late last year found that wild boars that were drawn to oil palm plantations in peninsular Malaysia for the fruit were responsible for extensive damage to small trees and shrubs in adjacent tracts of forest. Periods when the oil palms were mature and therefore bearing fruit coincided with a "hyper-abundance" of boar nests, made using understory vegetation such as tree saplings. Nest density swelled a hundredfold in these instances, and dropped just as dramatically during periods of replanting, when no palm fruit was available.

*Banner image: A male bearded pig surveys his territory, with a myna aboard. Photo courtesy of Rudi Dehaux for the Danau Girang Field Centre.*

**FEEDBACK:** Use [this form](#) to send a message to the author of this post. If you want to post a public comment, you can do that at the bottom of the page.

Article published by Basten Gokkon

Animal Behavior, Animals, Conservation, Deforestation, Environment, Forest Destruction, Forests, Habitat, Habitat Degradation, Habitat Destruction, Habitat Loss, In-situ Conservation, Mammals, Oil Palm, Palm Oil, Palm Oil And Biodiversity, Plantations, Rainforest Animals, Rainforest Conservation, Secondary Forests, Tropical Forests, Wildlife, Wildlife Conservation

### Most Read

- Epic battle between tiger and sloth bear caught on film
- Last of its kind: sole surviving male northern white rhino is gravely ill
- Fang trafficking to China is putting Bolivia's jaguars in jeopardy
- Pepsi cuts off Indonesian palm oil supplier over labor, sustainability concerns
- "Biogeographical oddity": New monitor lizard is the only large predator on remote Pacific island
- Intact forests are critically important, scientists say
- Penguin mega-colony discovered using satellites and drones, raising scientists' hopes

### Support us

Mongabay is a non-profit conservation news service that depends on support from readers like you.

[Donate](#)

### View targeted feeds

by topic  by location

|                |                          |
|----------------|--------------------------|
| • Agriculture  | • Animals                |
| • Birds        | • Climate Change         |
| • Conservation | • Deforestation          |
| • Energy       | • Featured               |
| • Forests      | • Happy-sabbat Environ.. |
| • Herps        | • Indigenous Peoples     |
| • Interviews   | • Mammals                |
| • New Species  | • Oceans                 |
| • Palm Oil     | • Rainforests            |
| • Technology   | • Wildlife               |

[Many more topics](#)

### Email Updates

[Subscribe](#)

### Recent Posts

- [In Colombia, a national park's expansion announced as deforestation progresses](#)
- [Europe's beetle species plummet as trees disappear](#)
- [Audio: How effective is environmental restoration?](#)
- [Bornean bearded pigs seen adapting to oil palm habitats, study finds](#)
- [Mexico City dwellers shoulder future of their urban 'Water Forest'](#)

### Podcast

[Our biweekly podcast delivering news & inspiration from nature's frontline.](#)

### Quick updates

Daily topic-based news alerts

### Republish

You may republish Mongabay content in your publication at no cost.

### Social channels

- [FACEBOOK](#)
- [TWITTER](#)
- [INSTAGRAM](#)
- [LINKEDIN](#)
- [YOUTUBE](#)
- [RSS / XML](#)

[DONATE TO MONGABAY](#)