

Mystical photographic work capturing the glowing lights produced by Hime fireflies, which inhabit bamboo thickets.

# Fireflies Glowing Faintly in Nighttime Satoyama Scenes

Nomiyama Kei, a photographer who captures wondrous scenes of countless fireflies floating through summertime *satoyama*<sup>1</sup> environments, spoke with us about the charms of these luminescent insects.

(Text: Morohashi Kumiko)

Nomiyama Kei photographs fireflies, mainly in Shikoku.<sup>2</sup> While researching environmental pollution as an associate professor at the Ehime University Center for Marine Environmental Studies, he is also a talented, award-winning photographer with a history of many accomplishments. Among these, he was named a Photographer of the Year in the Sony World Photography Awards, the largest competition of its kind in the world, and a first for a Japanese photographer.

Nomiyama Kei began photographing fireflies around 2016, a practice he took up after first shooting photos of fireflies at a site famous for seeing them, located near a diving spot where he went to enjoy his hobby of scuba diving.

“Photographing fireflies involves using techniques to incorporate elements that may be difficult to see with the naked eye into the image. I felt that the finished work by using these techniques had the chance

to more powerfully present the appeal of nature as found in the familiar *satoyama* environments all around us. After that, I started visiting a wide range of locations, mainly around Shikoku.”

In late May on Shikoku, the luminescent glows of Genji fireflies<sup>3</sup> can be seen all around the clear-flowing streams and rivers, including the Shimanto River, that they inhabit.

“To capture the luminescence of fireflies in a night scene, I will take a series of shots of 15 to 20 seconds each, with a total exposure time of around 20 minutes, and use a brightness-comparison image-overlaying method<sup>4</sup> to create a single composite image from them. Fireflies synchronize their flashing with others next to



Nomiyama Kei in a recent portrait.





Above: Beautiful light of fireflies reflected on the water's surface. Photographed along the Nakasuji River in Kochi Prefecture.

Below left: Genji fireflies emitting light as they mate.

Below right: Photographic work shot near a bridge designed to be underwater during a flood, spanning the Shimanto River basin, a famous firefly-viewing spot.



them, so their light tends to exhibit slow, wave-like motion. The photographic image makes it look as if they have all been illuminated at once, presenting a different scene than the impression you get seeing them in person with the naked eye.”

Nomiyama's photos always show the *satoyama* environments that the fireflies inhabit.


“It feels extremely important to me to incorporate into the work a sense of the environmental conditions in which the fireflies act, for instance by including the look of the forests, rivers, ground surfaces, and so on that the fireflies need for their habitat, for example.”

The environments in which they develop hold particularly vital significance, he says, for forest-dwelling Hime fireflies.<sup>5</sup>

“Since female Hime fireflies have degenerate wings and can't fly, they never move from the forests where they have hatched and developed. Ordinarily, individual species will adopt survival strategies according to the environmental changes—ways to spread their genes further away—but Hime fireflies lack that ability. They could be at risk of extinction in certain scenarios because of that, so it's particularly vital to protect the forests that these fireflies make their homes.”

Nomiyama hopes that his work might convey a sense of the rich abundance of nature in Shikoku, and even the history of *satoyama* environments, which involves both people and fireflies. He also has something he would like everyone to be sure to try out, he says, when they actually go firefly-viewing.

“When you go out to appreciate the sight of fire-

flies, I would hope that you take in the fragrance of the forest there, as well. If you experience the fragrance of the trees, of the grasses, and get a feel for the type of natural environments where the fireflies live, I am sure you will get a real sense of the importance the forests have. Also, I would like to ask that you try as much as possible to keep the use of flashlights and other intense light sources to a minimum during the hours when fireflies are glowing in the night., Actually, such actions will lead to help protect them.” 



A female Hime firefly that cannot fly due to its degenerate hind wings.

1. Also known as *satochi-satoyama*. Areas located between tracts of wilderness and urban buildup that consist of human settlements and secondary forests surrounding them, along with farmland, irrigation ponds, grasslands, etc. Such environments are formed and maintained through human interventions associated with agriculture, forestry, etc. (Ref.: <https://www.env.go.jp/nature/satoyama/top.html>)
2. One of the four main islands that make up the Japanese archipelago, along with Honshu, Hokkaido, and Kyushu. Home to four prefectures: Tokushima, Kagawa, Ehime, and Kochi.
3. *Genji-botaru* (*Nipponoluciola cruciata*), an insect found in Honshu, Shikoku, and Kyushu. Adults are 12–15 mm long, characterized by red thoraxes and posteriors that emit light at nighttime. Aquatic by nature, they typically glow during night hours around streams in *satoyama*-type environments from May to June.
4. An image processing method that involves making single composite images by layering multiple images, comparing the relative brightness of each pixel and selecting the brighter pixels for each. Often used in photographing star trails, fireflies, etc.
5. *Hime-botaru* (*Luciola parvula*), a terrestrial insect, a bit smaller than Genji and Heike (*Aquatica lateralis*) fireflies, which produces a flashing, golden light. Females are flightless, with degenerate hind wings.
6. Flashlights and other intense lights inhibit the reproductive behavior of fireflies.