

# Treasures of Minamijima

Minamijima is the only uninhabited island you can land for sightseeing in the Ogasawara Islands. You can enjoy the beautiful landscape of the karst terrain (a landscape created by erosion and weathering of limestone).







Lapiés (sharp-pointed limestone)

Doline (mortar shaped depression)

Semifossils of formerly inhabited land snails

Minamijima is home to many endemic species to the Ogasawara Islands and rare creatures, including seabirds, coastal plants and animals.



















Abbreviations

E: Endemic species to the Ogasawara Islands N: Natural Monuments of Japan and/or Tokyo

R:Descripted species in Red Data Book of Japan and/or Tokyo W:Widely distributed specie

### [ Ecosystem Characteristics of Minamijima ]

#### An Island Where Coastal Plants Have Recovered

Plants that were once damaged by feral goats or trampled by tourists have been restored through various efforts.

#### Habitat for Endemic Insects and Land Snails

There are many insects and land snails native to the Ogasawara Islands, because green anoles and planarians (such as the *Platydemus manokwari*), which are predators, have not invaded the area.

#### The Largest Seabird Breeding Area in the Chichijima Islands

A large number of seabirds such as brown boobies, wedge-tailed shearwaters and Bulwer's petrels nest and breed here.

# Minamijima Nature Observation Map



In-yo-ike Pond

Ogi-ike Lagoon

Sameike Bay

In-yo-ike Pond is a brackish water pond where the near threatened aquatic plant Ruppia maritima grow. It is also a resting place for migratory birds and a habitat for dragonflies and other aquatic insects. In addition, there is also a population habitat of the Cardisoma rotundum (crab), whose distribution is limited to the Ogasawara Islands and the Nansei Islands.



Ischnura senegalensis In-yo-ike Pond



Resting wild ducks

#### Minamijima Ecotourism Rules

- · Follow the instructions of the Tokyo Nature Guide and do not walk except on the designated route.
- Do not feed, surprise or drive animals
- · Do not take animals, plants, rocks, fossils, etc. off the island, leaving them in their original state.
- Do not scribble on rocks.
- · Take all garbage back with you.



View of Ogi-ike Lagoon from the East Ridge. Ogi-ike Lagoon has been selected as one of the '100 Views of New Tokyo.

> The sandy beach beside Ogi-ike Lagoon is a spawning ground for green turtles



Semifossils of land snails (such as Mandarina luhuana and Mandarina chichijimana) that once lived in Minamijima. Collecting is legally prohibited.



On the East Ridge, you can get a close look at the "Lapiés" that is formed when limestone is dissolved by rainwater, a feature of Minamijima landscape.



From the East Ridge, you can see Kannukijima Island and other limestone reefs, as well as "Heart Rock" of Chichijima Island in good weather.



Sandy beach

Vitex rotundifolia community. Some areas are covered by yellow vine of Cassytha filiformis



East Ridge The slope is covered





Wedge-tailed shearwaters dig in the soil and nest in holes. They may nest just off the observation path.



At the top is a giant Lapiés



with *Scaevola taccada* 

Geograpsus grayi



Blueberry hermit crab



Near the landing site, you can also observe the coastal plant Limonium wrightii var. luteum.



You can observe the nesting and breeding of the brown boobies, during the breeding season, from April to September.



**Landing Site** 

Sameike Bay

《Legend》 ■●●● Nature observation path

Whitetip reef sharks sometimes swim there.

# Formerly Damaged Vegetation in Minamijima

## The Former State of Minamijima











In the 1960-70s, Minamijima was an island where plants were consumed by feral goats, and where there were many unplanted areas (bare ground) due to trampling of the soil.



After that, tourism started, but there were no rules for tourism. So tourists were free to roam the island without restrictions. As a result, negative effects of human trampling were also seen.

As a result, when it rained, the red soil in the bare areas flowed out, and vegetation restoration was slow.





#### [Vegetation Restoration Work]

Starting in 2001, we spent 5 years constructing earth retaining walls to stop the runoff of red soil, transplanting sod grass, and other works.





Repairs of nature observation path by local guides (2020)

#### [Maintenance of Nature Observation Path]

In order to reduce the damage to the nature observation path and surrounding vegetation, measures such as installing and repairing stepping stones were taken.

# Restoration Has Been Progressing Through Various Efforts

### The Current State of Minamijima











Since around 2000, the Tokyo Metropolitan Government and the Ogasawara village began discussion on the conservation and use of Minamijima, and started restoration works of the natural environment (hard measures) as well as setting the rules for tourism use and training nature guides(soft measures).

Implementing both hard and soft measures at the same time enabled to maximize the effects of these synergies.







#### [Ensuring Eco-Friendly Walking]

By limiting the places where people can walk and having a guide lead the way, the damage to vegetation can now be reduced.



Burrows of wedge-tailed shearwaters (2022)



Wedge-tailed shearwater chicks in their burrows (2022)

#### [Effects of Eco-Friendly Walking]

In ridges and sod grass areas where no one was allowed to enter, nesting numbers of seabirds such as wedge-tailed shearwaters increased.

# Alien Species Control Projects and Their Results

Increase in Native Species Such as *Cirsium boninense*Due to Extermination of Alien Plants

The Tokyo Metropolitan Government's extermination program for invasive alien plants and volunteer activities to remove them are ongoing. As a result, the population of many native plants, including rare plants such as the *Cirsium boninense* and other endemic species to the Ogasawara Islands, has increased and the growing area has expanded.



Before extermination



Immediately after extermination

(Alien plants were uprooted.)







Growth and reproduction of *Cirsium boninense*(The population has increased and the growing area has expanded.)

# Improving the Reproductive Success Rate of Bulwer's petrels by Eliminating Rats

To prevent rats from eating seabird eggs and chicks, we have been eliminating rats since 2012. As a result, the number of rats decreased and the reproductive success rate of seabirds increased. In particular, Bulwer's petrels, a small seabird, showed a remarkable increase in reproductive success.



Bulwer's Petrel



Feeding damage to seabird eggs by rats



Poison bait feeder and attracted rats

### Ecotourism in Minamijima













# Taking Over Minamijima, a Treasure Trove of Nature, for the Future Generations

### "Wonderful" of Minamijima, Where Rare Creatures Are Protected

Minamijima has "landscapes" that represent the Ogasawara Islands. Among them, Ogi-ike Lagoon has a beautiful contrast between the blue sea and the white sand beach. In addition to these "landscapes," the preservation of seaside ecosystems and the abundance of rare animals and plants are some of the "wonderful" things about Minamijima.

The reason there are so many rare plants and animals is due to the following two factors.

- 1) Eradication of the feral goats has been completed.
- 2) No invasive alien species have caused serious damage to endemic species to the Ogasawara Islands.

However, because many people land in Minamijima, the risk of a new alien species invasion is always high. So far, islanders, tourists and other visitors to Minamijima have observed the rules of use with the desire to "no more alien species" and to "protect Minamijima." Through these individual efforts, we have been able to prevent the invasion of highly invasive alien species groups and maintain "Minamijima, where rare creatures are protected."

Note: In various parts of the Ogasawara Islands, efforts are being made to eradicate alien species, to prevent their invasion, and to prevent their spread. However, in Chichijima Island where the eradication of feral goats has not been completed, many native plants, including rare and endemic species to the Ogasawara Islands, are eaten. In addition, in the islands where green anoles invaded, endemic diurnal insects are preyed upon and endangered.

## Please Read Your Contribution Will Protect the Ecosystem of Minamijima

Many of you with this brochure boarded at Takeshiba Pier.

Remember, before boarding, you "removed the mud off your shoes" and "disinfected" them with seawater.

In other words, by the time you set off from Takeshiba Pier, the measures against alien species had already started.

After this, there will be repeated calls for measures against alien species, such as "removing mud from shoes" and checking for plant seeds on clothes and luggage. These "little things" that each of us does frequently will lead to the inheritance of the ecology and beauty of the Minamijima, and by extension, the nature of the Ogasawara Islands, for the future generations.





To prevent the migration of alien species, please remove mud from your shoes, dust your clothes, bags, hats and other belongings before boarding each ship, and cooperate to prevent the migration of green anoles, alien ants and seeds of alien species. In addition, please cooperate in cleaning the soles of your shoes in seawater to prevent the migration of Platydemus manokwari (predatory planaria).

#### Provision of Restrictive Acts by Law

- "Special Protection Areas" stipulated in the Natural Parks Act (for the entire Minamijima)

  The following activities are prohibited: collecting or damaging plants, planting or seeding, capturing or injuring or killing animals, collecting eggs, releasing animals, setting fires or bonfires, or affecting landscape maintenance, etc.
- "Domestic Endangered Species of Wild Fauna and Flora" stipulated in the Species Conservation Act

  It is a group of species designated for the conservation of endangered species of wild fauna and flora and is prohibited from being captured, collected, killed, damaged or transferred. Some of these are also subject to Protection and Reproduction.
- "National Designated Natural Monument" designated under the Law for the Protection of Cultural Properties

  Permission from the director-general of the Agency for Cultural Affairs is required to conduct acts that affect natural monuments.
- Measures against alien species based on the Act on the Prevention of Adverse Ecological Impacts Caused by Designated Invasive Alien Species

It is necessary to prevent native ecosystems from being damaged by alien species (including pets), such as not bringing in alien species.





The Ogasawaramura Tourist Association HP To land on Minamijima, you must be accompanied by a Tokyo Nature Guide.

Inquiries about eco-tours to Minamijima
The Ogasawaramura Tourist Association

Higashimachi, Chichijima, Ogasawara Village, Tokyo 100-2101 HP https://www.ogasawaramura.com/ TEL: +81 (0)4998-2-2587





### Minamijima Treasure Trove of Rare Nature

March 2023 Registration Number: (4)3 Production and Issue: Ogasawara Branch Office, Tokyo Metropolitan Government Edited by WAKEN SEKKEI Co., Ltd.

Design assistance: Fuwari Club Photo Courtesy: Institute of Boninology and Mahito Tokutake

Inquiries about this brochure

Civil Engineering Division, Ogasawara Branch Office, Tokyo Metropolitan Government Nishimachi, Chichijima, Ogasawara Village, Tokyo 100-2101 TEL: +81 (0)4998-2-2167