

## Endangered Species in Hiruzen

The wealth of plant and animal species living in Hiruzen includes some that are extremely rare and endangered.

One of the most famous residents is a critically endangered longhorn beetle known by the tongue-twisting name of *fusahige-ruri-kamikiri* (*Agapanthia japonica*). While this beetle could once be found throughout central Japan and Hokkaido, its numbers have dwindled along with the grassland habitats it requires. The Hiruzen Highlands has become an important stronghold for this species, which lays its eggs and feeds on the citron daylily (*Hemerocallis citrina*) that grows in the region's wet grasslands. Annual controlled burns in the highlands keep the ecosystem healthy and prevent it from reverting to forest.

Another vulnerable species is the Japanese luehdorfia (*Luehdorfia japonica*), a butterfly that appears only once a year around April—hence its nickname of “spring goddess.” The insect thrives in broadleaf deciduous forests with sparse undergrowth, a habitat abundant in Hiruzen thanks to a forestry practice known as coppicing. Coppicing involves cutting trees to use for charcoal, then allowing them to grow back from their stumps. During the intervening years, leaves and fallen branches are gathered for use as fuel and fertilizer, clearing the undergrowth and ensuring an ideal environment for the Japanese luehdorfia.

The aquatic environments of Hiruzen are also home to rare species, including the freshwater pearl mussel (*Margaritifera laevis*), one of the most critically threatened freshwater bivalves in the world. Globally, the number of freshwater bivalves has declined precipitously in the last few decades due to habitat destruction and other human-related factors, but there are still healthy populations of freshwater pearl mussels in Hiruzen's Tendani and Obara Rivers. These organisms play an important role in maintaining a clean environment for other river species by filtering particulate matter, releasing nutrients, and mixing sediment.

Of the 2,836 vascular plant species found in Okayama Prefecture, about 2,000 are found in Hiruzen. Some are endemic, meaning they are found nowhere else in the world. One such species is *Hiruzen baikamo* (*Ranunculus nipponicus* var. *okayamensis*), a flowering waterweed found in the small irrigation canals that traditionally supplied water to local farms for agriculture and daily life. Another is *Hiruzen suge* (*Carex aphyllopus* var. *impura*), a sedge collected for the first time in Hiruzen in 1930.