

## Ongoing Evolutionary Process — Ogasawara Islands

The Ogasawara Islands World Heritage Property is located approximately 1,000 km south of the main Japanese Archipelago. The islands are surrounded by sheer cliffs, and ocean whose deep blue colour is referred to as 'Bonin blue'. The terrestrial environment is dominated by subtropical forest and sclerophyllous shrubland. As the Ogasawara Islands have never been part of a continent, a variety of animals and plants have evolved in their own distinctive ways. About 70% of the vascular plants on record, and over 90% of the more than 100 species of land snails, are endemic to the islands. Ongoing evolutionary processes observable on the islands include 'adaptive radiation', in which a common ancestor changes into significantly diverse species according to the environmental conditions, and the evolution of species from marine to terrestrial forms.

- 1 Sclerophyllous shrubland (Anijima Island)
- 2 Endemic subspecies of Japanese wood pigeon (Columba janthina nitens)
- 3 Boninosuccinea ogasawarae, a species of land snail
- 4 Bonin flying fox (Pteropus pselaphon)
- 5 Luminous mushroom (Mycena chlorophos)
- 6 Semifossil of Mandarina luhuana







#### World Natural Heritage in Japan





- 3
- 1 Brown bear (Ursus arctos)
- 2 Chum salmon (Oncorhyncus keta) running upstream
- 3 Steller's sea eagle (Haliaeetus palgicus) resting on sea ice
- 4 Sea ice reaching the Horobetsu-daichi tableland



# Interaction between Marine and Terrestrial Ecosystems — **shiretoko**

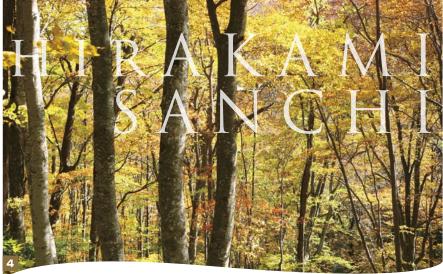
The Shiretoko World Heritage Property is composed of part of the Shiretoko Peninsula, located in the northeast of Hokkaido Island, and its surrounding marine area. A harsh environment has discouraged exploitation of this land and left the vegetation undisturbed. An integrated and complex ecosystem, linking seas, rivers and land, has emerged within its confines. The marine area around the Shiretoko Peninsula, the Northern Hemisphere's most southerly sea with seasonal sea ice, is icebound during the winter, but becomes a dynamic stage for the wildlife food chain in the spring, when phytoplankton blooms occur. This circulation of life supports many salmonid species, endangered Blakiston's fish owl (*Ketupa blakistoni blakistoni*), densely-populated brown bear (*Ursus arctos*), and other animals.







- 1 Asiatic black bear (Ursus thibetanus)
- 2 Japanese serow (Capricornis crispus)
- 3 Pseudolysimachion schmidtianum subsp. senanense var. shiragamiense, a species endemic to Shirakami-Sanchi
- 4 Autumn foliage in the beech forest



### Remnants of ancient vegetation

— Shirakami-Sanchi

The Shirakami-Sanchi World Heritage Property is located in the northern part of Honshu Island. It contains one of the largest virgin beech forests in East Asia, which forms an extensive remnant of the cool-temperate beech forest that has covered the mountains of northern Japan for 10,000 years. This forest is of particular value, as it emerged from circumpolar vegetation of around 30 million years ago, and still maintains its characteristic species. A pure forest of Japanese beech (*Fagus crenata*), able to survive under snowy conditions, has developed in this often heavily snowbound environment. The water-retaining beech forest is home to a plentiful ecosystem with abundant wild fauna and flora, including black woodpecker (*Dryocopus martius martius*), Asiatic black bear (*Ursus thibetanus*), Japanese serow(*Capricornis crispus*), and *Pseudolysimachion schmidtianum* subsp. *senanense* var. *shiragamiense*.

#### World Natural Heritage in Japan

# A vegetational microcosm of the Japanese Archipelago

— Yakushima

Situated off the southernmost tip of Kyushu Island, the Yakushima World Heritage Property is a mountainous island with high peaks. The vegetation of Japan, which stretches from north to south, is reflected in miniature on this island, ranging from coastal vegetation with subtropical elements such as Ficus superba var. japonica, to evergreen broadleaf forest such as Castanopsis sieboldii, to Japanese cedar forest, to cold-temperate bamboo grassland, and to high moor, as elevation increases. It is one of a few locations in the north temperate zone where this kind of vertical plant distribution may be observed. The area receives so much precipitation that it is often described as 'rainy 35 days a month'. In this humid environment, fresh green rheophytes and epiphytes abound, in a distinctive landscape dominated by a natural forest of immense Yakusugi trees, Japanese cedars (Cryptomeria japonica) over 1,000 years old.

- 1 Kohananoego, a high moor
- 2 Endemic subspecies of Japanese macaque (Macaca fuscata yakui)
- 3 Rhododendron (Rhododendron yakushimanum)
- 4 Endemic subspecies of Sika deer (Cervus nippon yakushimae)
- 5 Jomon Sugi, a Yakusugi tree with trunk circumference of 16 m









July 2012

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