## Coexistence of Nature and Humans - Towards the 21st Century (4)

## Part 4: Nature and management of Okegaya-numa marsh

In spite of its proximity to the city and its susceptibility to urban development, Okegaya-numa marsh in Shizuoka Prefecture's western Iwata City (known in Japan as the hometown of the J-League football team Jubiro Iwata) remains a rare paradise for dragonflies. Here not only various kinds of dragonflies can be seen, but also a rich biodiversity exists which includes other aquatic plants and animals, surrounding forests and grasslands.

The main feature of the vegetation in Okegaya-numa is the richness in aquatic plants, and the marsh which is covered with reeds and Indian rice presents a sort of primeval scenery. Here precious clumps of rabbit ear irises are found, as well as endangered *Utricularia tenuicaulis* and *Trapa incisa*. Moreover, *Euryale ferox*, which is listed as endangered in the Environment Agency Red Data Book, is flourishing on the marsh surface. The marsh is surrounded by trees mainly of evergreen broad-leaf or deciduous broad-leaf species, and ground water flowing into the marsh comes from rainfall filtered through such natural forest, and thus retains a good water quality. Furthermore, this forest serves as a feeding place and resting area for dragonflies. It also shelters them from strong winds. The surrounding forested environment, therefore, is the key to the protection of wildlife in the marsh.

The wildlife "signature species" in Okegaya-numa are undoubtedly the dragonflies, and 65 species of them have so far been identified in this area. One of the most noteworthy among them may be the *Libellula angelina* which is also listed as endangered in the Environment Agency Red Data Book. The place is also famous for a great variety of wild birds, and 140 species have been identified here to date. When I visited this marsh area in November, there were flocks of ducks, mainly mallards, resting on the water and I was also able to observe gray herons and kingfishers.

Okegaya-numa is fortunate in that it has never been polluted by contaminated water produced by human beings, but without the long-term efforts of those persons involved in the conservation of this area, the wonderful nature of Okegaya-numa would not have been preserved. The prefectural government bought up the land and designated the area a nature and wildlife reserve, and established a committee on the conservation of Okegaya-numa which meets regularly. In addition, local conservation groups have been working hard for the same cause. Aside from constructing walking paths and providing instructions for visitors, they are making various efforts such as the extermination of crayfish harmful to aquatic plants and are also active in the management of surrounding natural forests. Through direct or indirect participation in the activities of such conservation groups, one gets a sense of just how delicately formed is the balance of nature. Such experiences could serve as the first step in developing a philosophy of coexistence between nature and humans.



The marsh covered with reeds and Indian rice and the surrounding woodland



Water birds resting on the marsh surface