



Kirigamine

Goal Restore the Kirigamine Grassland's diverse natural environment in the 1950s

Designation:

Yatsugatake-Chushin Kogen
Quasi-national Park

Location:

Suwa, Chino, Shimosuwu Cities,
Nagano Prefecture

Year Initiated: 2008

**Kirigamine Nature
Conservation Council**

The concerns are wetland desiccation, forest expansion and Sika deer impact on plants of recent years. This project intends to preserve and restore the Kirigamine's diverse natural environment consisting of semi-natural grasslands, wetlands and forests.



Nikko-kisuge (*Hemerocallis dumortieri* var. *esculenta*)



Kirigamine-hiougi-ayame (*Iris setosa* var. *hondoensis*)



Kirigamine-touhiren (*Saussurea* sp.)



Korin-ka (*Senecio flammeus*)

Kirigamine Grassland is a semi-natural grassland ecosystem stretching at an altitude from 1,500 to 1,900m. Containing patches of three raised bogs, including a national natural monument Yashimagahara Wetland, and primeval forests, called 'juso', the grassland system provides habitats for rare plant species, such as Kirigamine-hiougi-ayame, Kirigamine-asahiran (*Eleorchis japonica* var. *conformis*), and Hozakishimotsuke (*Spiraea salicifolia*). It had been used as hay fields until the 1950s. However, spreading use of chemical fertilizers, mechanized farming, and other reasons changed its role. In 1964 the grassland was designated as a part of Yatsugatake-Chushin Kogen Quasi-national Park, which promoted recreational use

as a park with outstanding scenic values. Since then the grassland system has evolved into a tourist spot.

A famous view is that Nikko-kisuge (Zenteika) decorates the grassland like a yellow carpet. However, the species habitat area is gradually diminishing with alterations of grassland plants and forest expansion. In recent years, influences of Sika deer (*Cervus nippon*) on plants and further ecosystem alterations are also noted. Therefore, restoration measures under planning include fencing to protect valuable plants and other communities and monitoring the effectiveness of protection fence based on deer tracking data.

Approaches

- ▶ Protect vegetation by fencing →①
- ▶ Track Sika deer movement →②
- ▶ Monitor effectiveness of protection fence →③

For grazing control, electric and other types of fences were experimentally installed. By determining Sika deer movement and grazing damage, effective protection methods will be identified to develop restoration strategies.

① Protecting vegetation by fence installation

Electric and other types of fences are installed as a pilot study, aiming for protection of valuable remnant vegetation.



Protected vegetation zone and fence installation

② Studying Sika deer movement

Attaching transmitters on Sika deer, track survey to monitor diurnal and nocturnal movement will be conducted. This survey also investigates deer visits at the enclosure sites, using night spotlight census.



Telemetry survey

③ Examining fencing effectiveness

Based on results of deer tracking survey, more effective ways of fence layout and other details will be examined.

Related Web Sites

Kirigamine Natural Environment Preservation Council : <http://www.pref.nagano.jp/xtihou/suwa/seikatsu/future/future.htm>