

Annex2:

A Summary Report: Biological Significance of Ushirodani Valley in Nakaikemi-shicchi, a Ramsar Convention Designated Wetland.

Prepared by NACS-J

Introduction

-This is a summary of compiled biological information in Ushirodani valley (photo1), in which JR TT planned to construct railroad for Hokuriku bullet train.

-Local groups and field study specialists in this area provided us biological information. We appreciate their support to prepare this report in great part.

-However, the report itself had to be prepared in urgent situation to correspond against the newly approved construction plan. Therefore we think it is necessary to have robust structural survey being done for further sufficient evaluation of biological significance in this area.

-We do not indicate some common names of rare species in this paper due to conservation reason.



photo1 Ushirodani valley

Environmental Significance

1. It is habitat for 10 threatened species and more species rarely occurred.

Our survey showed the fact that Ushirodani valley was habitat for more than 20 listed species (10 Threatened, 11 Near-Threatened) on the Red List published by Ministry of the Environment.

Planned railroad will go through marshy ground which is exactly the habitat for threatened aquatic species gathered. Diverse aquatic fauna and flora are observed there including threatened species such as mizutoranoo (*Eusteralis yatabeana* photo2), mizuobako (*Ottelia japonica*), Morton damselfly (*Mortonagrion selenion*), kurogengoro (*Cybister brevis*), mizukohakugai (*Gyraulus sortitai*), Japanese rice fish (*Oryzias latipes*), yokohamashijiragai (*Inversiunio jokohamensis*), Asian clam (*Corbicula leana*) and natanekibasanagigai (*Vertigo eogea eogea*).



photo2: mizutoranoo (*Eusteralis yatabeana*)

Yokohamashijiragai (*Inversiunio jokohamensis*) and Morton damselfly (*Mortonagrion selenion*): There are diverse species which could be observed exclusively in Ushirodani within Nakaikemi-shicchi. It indicates that the environment is quite profound because of remaining rice paddy condition in Ushirodani despite the fact that had disappeared mostly in past 20 years. Especially Ushirodani is a significant biological hot spot in Nakaikemi-shicchi.

Besides marsh ground in valleys, forested area on both sides also supports threatened orchid species and provides reproductive habitat for rare butterfly species. Also birds breeding only in Japan such as Japanese yellow bunting (*Emberiza sulphurata* : Vulnerable, IUCN Red List) or Japanese night heron (*Gorsachius goisagi* : Endangered, IUCN Red List) are observed in Ushirodani. Some studies indicated that Japanese night heron and Grey-faced buzzard (*Butastur indicus* :Vulnerable, Red List MOE) might be breeding in Ushirodani valley.

2. Environmental significance in national wide view

Nakaikemi provides northern Japanese type-specimen of rice fish (*Oryzias sakaizumii*) which was newly found species in June. Ushirodani valley is biologically important area as corridor which connects between Nakaikemi-shicchi and its outer habitats.

Ushirodani valley is the site where Japanese firefly (*Luciola lateralis*) is most frequently observed among other spots in Nakaikemi-shicchi. Compared with the national survey results done by MOE (a project called Monitoring site 1000 satochi, done at 40 sites and more), firefly counts in Ushirodani was the highest among all the monitoring sites. It indicates that Ushirodani valley is one of environmentally crucial sites throughout the whole nation.

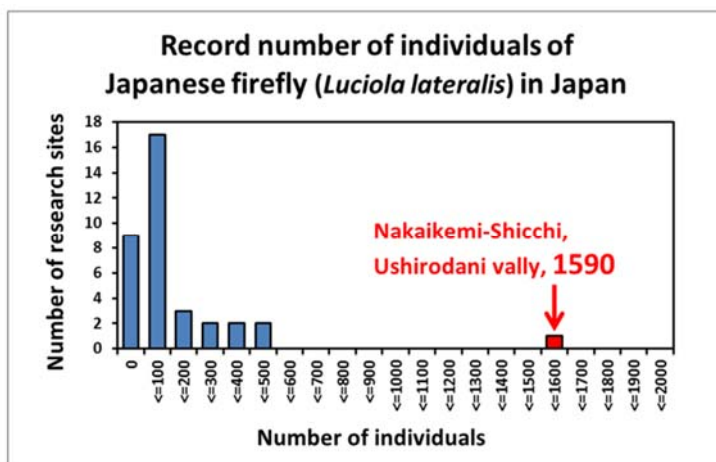


Figure: Firefly monitoring sites in Japan and its distribution (left) and a comparative study: the records of firefly individuals in Nakaikemi and other national monitoring sites (right). For comparison, we used average scores in 2 years (2010, 2011) for 36 monitoring sites. Nakaikemi also showed the highest firefly population value per research area among sites.

3. Abundant spring water resource supporting abundance in biota

Spring water runs constantly from the hillsides in Ushirodani valley, and this whole water system supports wetland environment formation stable. Mountains both sides supply water into the wetland. Unbroken stream lines coming from wetland create peripheral landscape, biotic community and hydrology system. Consequently all of this supports abundant biota at this moment. Especially the site right above the planned railroad route is exactly the spot with greater spring flow in Ushirodani valley.

Spring water from Ushirodani valley has been used for rice paddy field by human, moreover, a spring itself is a subject to worship in the community. Ushirodani provides a base for local activities and it is planned to be a main gate for visitors to this Ramsar site. Thus Ushirodani valley is important in various ways such as agricultural resource, cultural belief, environmental activities and recreational resource.

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