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Citation	北海道大学総合博物館研究報告, 7, 31-32
Issue Date	2014-03-31
Doc URL	<a href="http://hdl.handle.net/2115/55182">http://hdl.handle.net/2115/55182</a>
Type	bulletin (article)
File Information	4-Furukamappu-31-32.pdf



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## Recent Condition of the Conservation Status of the Furukamappu Mire (Lake Serebryanoye), Kunashir Island

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**Abstract** There are several sand dunes in southern part of the Furukamappu Mire (Lake Serebryanoye) and the rare community *Picea glehnii* forests on sand dunes were observed. The plants growing this area were recorded by observation and specimen collection, and we discussed the conservation status of this mire. Construction of an electric pylon caused some damages to the sand dunes, but few exotic species were observed in the area. However, numerous exotic plant species typically associated with urban areas were observed along the road around Furukamappu Pond.

**Key words:** conservation, Kunashir, *Picea glehnii*, sand dune

### Introduction

Furukamappu Mire (Lake Serebryanoye) located northwest of the town Furukamappu (Yuzhno-Kuril'sk) was formed after the sea receded about 3000 year before present (Korotky et al 2000). Among the sand dunes located along the south edge of the mire is a stand of *Picea glehnii*, and the *Picea glehnii* forests on sand dunes were observed in this mire. It was suggested that the *Picea glehnii* forest on sand dunes were very rare community and only founded in Furukamappu and Shunkunitai in Nemuro (Tatewaki and Hirano 1936; Tatewaki 1944).

### Materials and Methods

We surveyed these area: 1. sand dunes and neighboring mires, and 2. around Furukamappu Pond (Lake Serebryanoye), on 23 and 26 August, 2012. The plants growing these area were recorded by specimen collection and observation.

### Results and Discussions

Examination of aerial photographs and a field surveys by Y.Kato in 2003 revealed that the sand dunes on the edge of the mire were destroyed by the erection of power transmission lines (Figs. 1, 2). However, few exotic species were observed in the affected area in 2012 (Fig. 3).

Ruts considered to have been made by vehicles were discovered along the southern edge of the mire in 2003 (Fig. 4), but the mire vegetation had covered these by 2012. It was proposed that the vehicles responsible for causing the damage were likely involved in building or repairing the electric pylons.

In 2012, flowers of *Nuphar pumila* var. *pumila* and

*Sparganium emersum* were observed in Furukamappu Pond (Lake Serebryanoye) and *Nymphaea tetragona* was observed to have colonized away from the lake shore. The forest along the edge of the lake was dominated by *Picea glehnii* (Fig. 5).

A field ranger suggested that hunters used the area for leisure activities such as shooting practice, and numerous cartridge cases were found near the pond (Fig. 6). Many exotic plants typical of those found in urban areas were observed along the road to the Furukamappu pond which cut through the mire (Fig. 7). *Eriocaulon atrum* ([Nemuro-Hoshikusa] VU in Japanese Red List) and *Eleocharis acicularis* var. *longiseta* [Matsuba-i] were observed to have colonized puddles on the road (Fig. 8).

It was suggested that the central area of this mire including sand dunes kept relatively good condition. However exotic species invade margin area of the mire, so observation for mire conservation is necessary.

### Acknowledgements

We appreciated Antipin, M. A., Bobyr, I.G., Budaev, A., Loguntsev, A. E., and Nevedomskaya, I. A. of the State Natural Reserve "Kurilsky" for their help in our expedition. We thank to Dr. Hideki Takahashi for providing the opportunity of this survey and Dr. Hiroko Fujita (Botanic Garden, Hokkaido University) for use of photographs in 2003 survey. This study was supported in part by a Grant-in-Aid No. 21405009 to H. Takahashi for Scientific Research (B) from the Japan Society for the Promotion of Science.

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**Figure 1.** Degraded sand dunes in 2003 (photograph by H.Fujita).



**Figure 2.** The same degraded sand dunes, shown in Fig.1 in 2012.



**Figure 3.** Degraded sand dunes colonized by *Cornus canadensis* L.



**Figure 4.** Vehicle tracks in the mire area in 2003 (photograph by H.Fujita).



**Figure 5.** Shore of Furukamappu Pond (Lake Serebryanoye).



**Figure 6.** Dumped drum punctured by shotgun rounds.



**Figure 7.** Road to the Furukamappu Pond (Serebryanoye Lake).



**Figure 8.** *Eriocaulon atrum* Nakai [Nemuro-hoshikusa] in the puddles on the road.

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加藤ゆき恵<sup>1</sup>, 佐藤広行<sup>2</sup>: 国後島中部古釜布湿原の近年の状況

国後島中部太平洋側に位置する古釜布湿原は湿原南部に砂丘列があり、砂丘上にアカエゾマツ林が成立している。砂丘上のアカエゾマツ林は古釜布湿原と根室春国岱にのみ見られる希少な群落であるが、鉄塔と送電線の設置により砂丘列の一部が破壊されていた。破壊された砂丘は砂が露出していたものの、外来種の侵入はほとんど見られなかった。湿原北部の古釜布沼にはハンターが入り込み、沼へ至る未舗装の道路沿いに市街地と同じような外来種の侵入が見られた。

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