

The Change and Preservation of the Physiognomy of Forests

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Forestry After the Meiji Era

The main types of forests along the Saru River consist of mountainous forests, lowland forests, and plateau forests.

Among these, the mixed coniferous and broadleaved forests, and also conifer forests used to compose a major part of the mountainous forests. However, since the latter half of the Edo era, these ancient forests have decreased in size. Specifically, the number of forests in the upper regions of the mountains have decreased.

Originally, these forests were the habitat of large trees, which exceeded 1m in diameter and 30m in height. Nowadays, it is rare to see any that are larger than 80cm in diameter and 25m in height.

After the ownership of these forests shifted from public to private, these forests lost its coniferous trees. However, nationally-owned forests have kept the diversity as mixed forests consisting of conifers and broadleaved trees.

Since the Meiji era, we have seen an emergence of new flora forming



Photo: Mountain forest that spreads across the right bank of Saru River in Nibutani. There are many water oak, pin oak and painted maple in this broadleaved tree forest. Thus, the local residents have been supporting the growth of these mountains for use in daily life. (shot from the southeast).

pastoral forests seen in places such as Shukushubetsu, which have many conifers.

Changes in the Mountains due to the Modern Forestry

The modern-day logging industry around Saru River begins in 1906 when the Okuyama Match Factory

opened in Sarufuto (Hidaka, Tomikawa), who began felling Hakuyoju trees (Japanese poplar) until 1913.

In 1910, when the Oji Paper Manufacturing Company's Tomakomai factory opened, the company began felling conifers in Usappu (Hidaka, Chisaka area) in order to manufacture paper. After 1937, due to the prolonged Sino-Japanese war, the demand for military supply increased. Coniferous trees were used in the nation's movement towards self-sufficiency in pulp, and trees such as Yezo spruce, *Abies sachalinensis*, oak, swamp ash, birch, linden and Manchurian walnut increased in demand for the production of airplanes and warships.

Around that time, Biratori put a lot of effort into raising war-horses. This was economically beneficial for Biratori because of the production of war-horses was not expensive, and the animal's grazing helped manage the woodlands. They did so by creating woodland pasture to let horses graze in a fenced area in the forest. They also selectively pruned the forest, leaving only straight trees with an approximate diameter of 15cm, thereby raising both horses and

Table 1: Primary forests of Biratori-cho

1. Mountainous forest: Primary forests of the area
 - Mixed forests (consisting of conifers and broadleaved trees) and conifer forests occupy the major part of mountain land. There are conifer plantations and broadleaved tree forest (privately owned), as well as mixed forest of conifers and broadleaved trees (nationally owned).
 - Riparian forest Runs thinly along the tributaries between the mountains.
2. Lowland forest along the river: riverside forests that form in limited humid areas with long-term stability and grows Japanese elms and other trees. These primary forests along the rivers are decreasing in quantity and in size.
 - Low willow forest: forests that form along the river with a fast regeneration time. They have shrunk in size due to the development of agriculture and levee works.
3. Plateau forest: forests that form along marine terraces or river terraces among the mountains.
 - Broadleaved tree forest (Japanese emperor oak): the primary forest on marine terraces; decreasing in size due to the development of agriculture.
 - Spreads in broadleaved tree forests, in a mixed forest of conifers and broadleaved trees, and in marine terraces. Conifer plantation area. An emerge of a new landscape called a pasture-forest. (Miki, 2007)

arboreous material simultaneously.

In Biratori, Hon-cho, even now, we can see many straight pin oaks with diameters close to 30cm in the forests of the Piraturunai district across the Saru River.

The privately owned forests in Hidaka have gone through several rounds of deforestation and therefore it is unusual to see a forest full of pin oaks in good condition. All of the lower-level trees grown in the inner area of the forest have been pruned in the name of broadleaved tree reformation, leaving only straight pin oaks on the upper layer of the forest. This awkward ecosystem is thought to have been the result of the local residents creating woodland pastures described above.

Forests that Nurtured AINU Culture

Looking at an old map from 1896, we can see that the woodlands below Nina downstream of Saru River are filled with symbols which signify broadleaved trees. However, these symbols cannot be found upstream.

In other words, this area seems to be the precise borderline between the broadleaved tree forest and the mixed forest (consisting of both coniferous and broadleaved trees). Fupkariomanai, a creek along the Abetsu River stream, is a reflection of the native *Abies sachalinensis* trees. Furthermore, places, like Penkeyame and Pankeyame tells us that there were chestnut trees in this region as well (refer to the ○ symbol on the diagram).

In the right bank of *Pankepirauturu*, it has been said that the forests contained many chestnut trees (Hiramura, 2006), and even now there are several hundred-year-old chestnut trees in the Yoshitsune shrine.

The area near Biratori Hon-cho is thought to be the point of separation between the two types of forests—chestnut and broadleaved—along the Saru River.

Conserving the Forest Today

The area around the right bank of Saru River in Nibutani is being conformed to become the Iwor

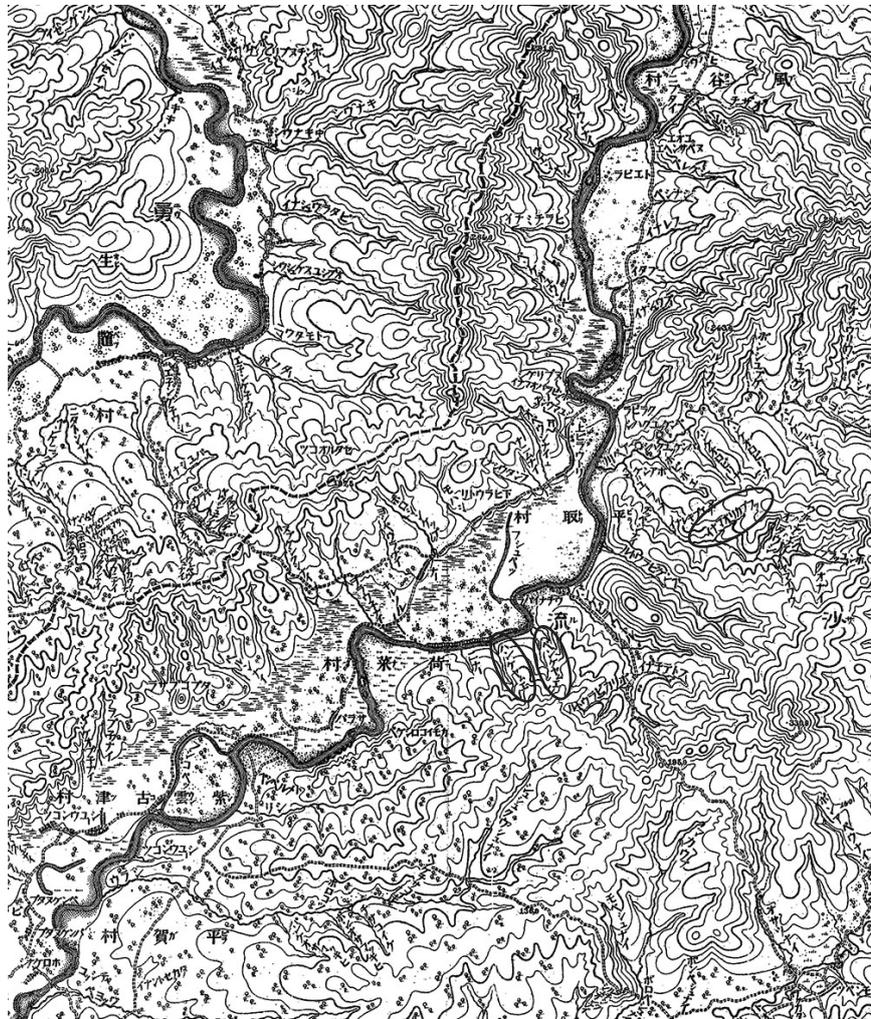


Diagram: An excerpt from the 1896 Hokkaido Map Scaled 1/50,000. There is a borderline between upstream and downstream near Nina, that separates the broadleaved tree forest (○) from the rest.

Table 2: Places in Honcho to Nina Named after Trees (an excerpt)

Names used in old maps	Ainu phonetics	Meaning
<i>Pankeyamue</i>	<i>Pankeyame</i> (panke yam e)	downstream side, chestnut, place (that exists)
<i>Penkeyamue</i>	<i>Penkeyame</i> (penke yam e)	upstream side, chestnut, place (that exists)
<i>Fupkariomanai</i>	<i>Fupkariomanai</i> (hup kar i oma nay)	<i>Abies sachalinensis</i> , harvest, place, that exists, creek

Forest. The township’s forest one was a mixed forest (consisting of conifers and broadleaves), but with the recent logging industry, has changed into a broadleaved tree forest.

Currently, we are taking action in the approximately 210 hectares of forest area to bring back the complexity of the layered structure of the forest through planned pruning and planting of trees.

For example, *atni* (lobed Elm), which is a type of tree often found in riparian forest, have decreased in quantity; however, by planting and helping to promote growth, we can secure the necessary quantities once again.

The bare rocks on the right bank of Nibutani lake and the *Abies sachalinensis* that grow on the ridge is a beautiful landscape which has nurtured the lives of Ainu people throughout history. It is important to help the regeneration of these important landscapes in order to transmit and preserve Ainu culture.

"Cultural landscapes of the Saru Valley formed by Ainu tradition and modern development"
 Designated as Important Cultural Landscape as of July 26th, 2007

For Inquiries
 Regarding the Landscape of Ainu Culture
 Nibutani Ainu Culture Museum
 Nibutani 55, Biratori-Cho, Saru-Gun,
 Hokkaido, 055-0101 Japan
 Phone: +81-1457-2-2892
 Fax: +81-1457-2-2828
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