

Eleocharis kurogawai

Family: Cyperaceae

Species: *Eleocharis kuroguwai* Ohwi

Common Names: kuro-guwai (Japan)

Synonyms: None provided

Bayer Code: ELOKU

Description: A rhizomatous perennial developing tubers. Stems are round, up to 1 m high, with nodes, ending in a terminal cylindrical inflorescence 2–4 cm long, continuous with the stem below. Seeds rounded below, conical above, 2–3 mm long.



Figure 1. *Eleocharis kuroguwai* from Morita (1997)*

*Date 24th May, 2003 Hirohiko MORITA, entrusted by Zenkoku Noson Kyoiku Kyokai, Co. Ltd., Tokyo, which possesses the copyright of above photographs.

Distribution: China, Japan, and Korea (NGRP, 2002).

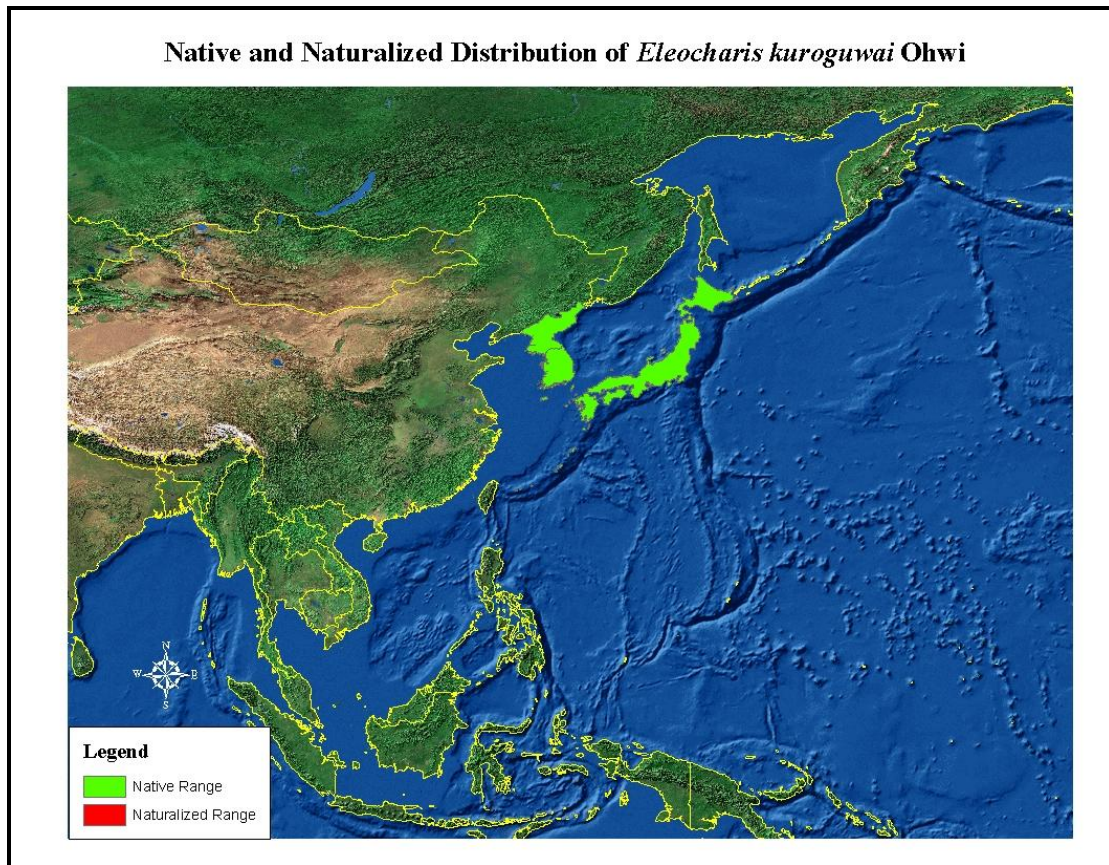


Figure 2. By Glenn Fowler, USDA APHIS PPQ CPHST, 2002 (Fowler, 2002)

Biology and Ecology: *Eleocharis kuroguwai* occurs at the edge of ponds, in ditches and in rice, flowering in August–September in Japan. Plants develop from seed or from tubers, which tend to sprout later than other weeds and are not readily destroyed by pre-planting tillage. The tubers develop mainly in the upper 10 cm of the soil, but some can occur down to 20 cm or below, from which depth they can readily emerge (Kim et al., 1997a). In detailed studies of the sprouting of tubers, Kim et al. (1996) confirmed apical dormancy within the tubers and some tubers’ remaining completely dormant into the season following formation. Tubers are formed under short days of 8–12 hours but not under 16-hour days (Ku and Choung, 1993). The same authors showed that tuber development is reduced by water depths greater than 5 cm. Tuber development is also reduced by shading (Inamura et al., 2001). Other detailed studies on the effects of environmental factors on the growth of *Eleocharis kuroguwai* were reported by Chun and Shin (1993) and Shin and Chun (1993).

Possibly Pathways to the United States: Because *Eleocharis kuroguwai* is a crop weed, there is a significant risk of accidental contamination of crop seed or other agricultural produce.

Adverse Impact: Holm et al. (1979) have listed *Eleocharis kuroguwai* as a “principal” weed in Japan and Korea. Because of the invasive qualities of *Eleocharis kuroguwai* in China, efforts are under way to develop a mycoherbicide based on the fungus *Epicoccossorus nematosporus* (Hong Yeon Kyu et al., 2002). Kim et al. (1997b) noted it to be among the dominant weeds of several rice ecologies in Korea. It could pose a significant threat to rice crops and wetlands in the United States.

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