Paralithodes camtschaticus

<table>
<thead>
<tr>
<th>Taxon</th>
<th>Family / Order / Class / Phylum</th>
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<td>Paralithodes camtschaticus (Tilesius, 1815)</td>
<td>Lithodidae / Decapoda / Malacostraca / Arthropoda</td>
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**COMMON NAMES (English only)**
Red king crab
Kamchatka king crab
Alaska crab

**SYNONYMS**
Unknown.

**SHORT DESCRIPTION**
This very large crab is an omnivorous predator and grows up to > 220 mm carapace and a span from leg to leg up to 1.4 m. A weight of >10 kg may be reached.

**BIOLOGY/ECOLOGY**

**Dispersal mechanisms**
Adult crabs are fast migrating with their long legs (up to 3-13 km daily and 426 km may be covered during a year).

**Reproduction**
This crab shows two migration patterns. The shoreward migration (10-30 m water depth) occurs in late winter and early spring during mating and breeding. Larval settlement occurs in shallower waters (<20 m). Once spawning is completed the crabs undertake a feeding migration to deeper waters (300 m). Individuals <20 mm carapace length (CL) remain solitary and may be found in hard substrates. In the second year (20-25 mm CL) grouping behaviour is seen. Sexually immature crabs (<120 mm CL) generally remain in shallow water at 20-50 m depth. Two-year-old crabs migrate to deeper waters. Extensive aggregations of both sexes are formed during the spring spawning season. Thereafter both sexes form separate aggregations for the remainder of the year. Their life span may cover 20 years.

**Known predators/herbivores**
Unknown.

**Resistant stages (seeds, spores etc.)**
None.

**HABITAT**

**Native (EUNIS codes)**

**Habitat occupied in invaded range (EUNIS codes)**

**Habitat requirements**
The crab tolerates water temperatures of –1.7 °C to 11 °C. As soon as the temperature decreases the crabs migrate to deeper waters where they over-winter. Little is known on the salinity tolerances of the crab. In Alaska crabs are found at salinities from 34 ppt to 22 ppt.

**DISTRIBUTION**

**Native Range**
It is native to the Okhotsk and Japan Sea, Bering Sea and northern Pacific.
Known Introduced Range
Its eastern distribution limits are the Kanin and Goose Banks near Cape Kanin, east of the Kola Peninsula. From 1992 the crab became abundant in NE Norwegian waters and the southernmost individual was caught at Folla, well south of the Lofoten Archipelago.

Trend
Spreading.

MAP (European distribution)

INTRODUCTION PATHWAY
Russian scientists intentionally introduced larvae, juvenile and adult king crabs to the southern Russian Barents Sea during 1961 to 1969. Ten years later a reproductive population had become established. The species continues to spread in Russia and northern Norway, which may have been due to both natural dispersal of larvae by coastal currents and by active migration of adults.

IMPACT
Ecosystem Impact
Especially during mass developments, the crab has an enormous predatory impact on local species. The nature of the food consumed varies per life stage. The pelagic larvae consume both phytoplankton and zooplankton and once settled feed on hydroids. Adult crabs prey upon a large variety of species.

Health and Social Impact
Unknown.

Economic Impact
Crabs in the by-catch of local fishermen cause concern as they damage fishing gear in gillnet, longline and trap fisheries.

MANAGEMENT
Prevention
Avoid moving the species to areas where it does not occur to create a fishing resource.

Mechanical
Today, selective crab fishing has been established in Norway. The population stock is managed jointly by Russian and Norwegian authorities, thereby creating a valuable fishing business. Due to the commercial interest
a total annual catch limit was set to avoid over-fishing of the species. Only male crabs larger 132 mm carapace length were legal to catch. In 2002 newly negotiated fishery regulations were introduced, and in Norway the king crab fishery became an ordinary commercial fishery with a Norwegian quota of 100,000 crabs annually. A free fishery west of 26 °E yielded 22 tons. East of this line the fishery is regulated. With this approach, it is hoped that this valuable resource can be maintained and at the same avoid further spread of the crab southwards. However, no decision has yet been made on how to prevent the species from migrating south and westwards.

**Chemical**
Unknown.

**Biological**
Unknown.

**REFERENCES**


**OTHER REFERENCES (selected from Jørgensen et al. 2005):**


Marukawa H (1933) Taraba-gani chosa [Biological and fishery research on the Japanese king crab *Paralithodes camtschatica* (Tilesius)]. Sui Shi Ho, Tokyo 4(37), pp 152


Vinogradov LG (1941) Kamchatskii krab. TINRO, Vladivostok, pp 94

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