

## ON THE DISTRIBUTION OF *Pelodiscus sinensis* (WIEGMANN, 1834) (TESTUDINES: TRIONYCHIDAE) IN THE RUSSIAN FAR EAST

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### INTRODUCTION

For the first time the chinese soft-shell turtle, *Pelodiscus sinensis* (Wiegmann, 1834) in the Amur River basin was noted after the results of R. Maack's expeditions (Maack, 1859, 1861). More detailed data appear after A. T. Buldovsky's (1936) and M. V. Okhotina's (1959) papers.

In 1970 – 1980s some data on the distribution of turtles in the south of the Far East (Tagirova, 1978, 1981; Khozatsky and Nesov, 1979) were published. A turtles population in the Bidzhan River (Middle Amur River area) was discovered in 1998 (Tarasov et al., 1998; Tarasov and Adnagulov, 1999). However the knowledge about this interesting and declining species is still quite poor.

### MATERIAL AND METHODS

Study of soft-shell turtle in the Russian Far East was conducted in 2001 using the analysis of different publications, as well as results of the field work in Primorskii and Khabarovsk Krai's, and Jewish Autonomous Obklast' (JAO). The turtle records were documented by activity remains and clutches on beaches. Some information was obtained by questioning of local people.

At present the range *Pelodiscus sinensis* within the studied area consists in a few populations, and seems to have more disruptive pattern as compared to the data of previous publications.

### RESULTS AND DISCUSSION

At least seven populations are known and named after their geographical localization (Fig. 1).

1. **Razdol'naya.** Razdol'naya River (South of Primorskii Krai). Perhaps, it is the smallest population of

*P. sinensis* within Russia. Information on turtles is referred to the vicinity of Pokrovka (about 100 km upstream of Razdol'naya River mouth). M. V. Okhotina writes "dead turtles were met on the Amurskii Bay shores after high floods in some years" (Okhotina, 1959: 142). According to some interrogated data, soft-shells are breeding in reservoirs in the Chinese part of Razdol'naya River (Chinese name is Suifung He) (V. A. Kostenko, 2001, personal communication).

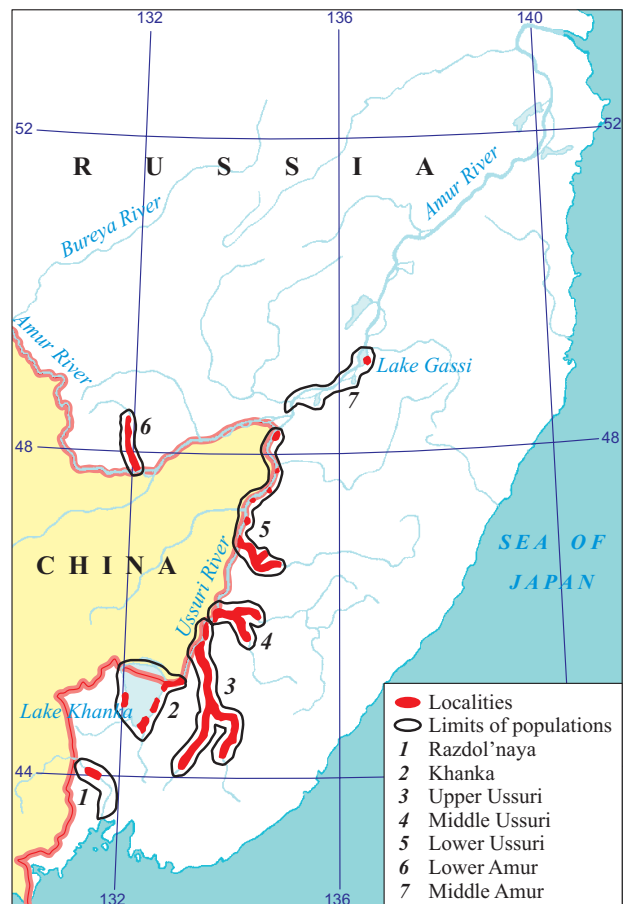


Fig. 1. Geographical localization of *Pelodiscus sinensis*.

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2. **Khanka.** Lake Khanka and lower parts of some of its tributaries, Ilistaya, Mel'gunovka, Spasovka, Troitskaya, Tur, and an upper part of the Sungacha River. There are few locations in Lake Khanka mostly noted as the turtle habitats, Sosnovyi Island, Cape Przheval'sky, Luzanova Sopka Peninsula, Lakes Gniloi Ugol, and Trostnikovoe. This is a well known population described by different authors (Przevalsky, 1870; Emelianov, 1923; Buldovsky, 1936; Okhotina, 1959; Khozatsky and Nesov, 1979; Bannikov, 1984; Darevsky and Orlov, 1988; Cherepanov, 1990; Maslova, 2002; etc.).

3. **Upper Ussuri.** Upper Ussuri River and some of its tributaries (Arsen'evka and lower Sungacha River). According interrogated data turtles are met in the Arsen'evka River about 120 km upstream of its mouth. It is the one of the mostly poorly studied populations.

4. **Middle Ussuri.** Turtles inhabit Middle Ussuri River, as well as lower of its tributaries (Bol'shaya Ussurka and Malinovka Rivers). This population seems be one of the most endangered and declining due to illegal hunting by Chinese immigrants (Maslova, 2002).

5. **Lower Ussuri.** Turtles are met in lower Ussuri River up to its mouth, lower Bikin River and some small right tributaries. The first descriptions of *P. sinensis* (as *Trionyx maackii* Brandt) within Amur River basin are referred to this population (Maack, 1859). Information on the turtles in lower parts of some rivers (e.g., Khor River) remains doubtful because those rivers do not present optimum habitats (relatively fast stream, up to 1.5 – 1.8 m/sec and relatively low maximum temperature, up to +15 – 16°C).

6. **Lower Amur.** Data on this population includes records of turtles living in the Amur River basin about 400 km downstream of the Ussuri River mouth. The most known is the Lake Gassi population (Buldovsky, 1936; Tagirova, 1979, 1981; etc.). Information on the turtles' distribution up to the Amur River mouth is doubtful.

7. **Middle Amur.** Bidzhan River (a left tributary of Amur River, JAO). This population was discovered a few years ago (Tarasov and Adnagulov, 1999; Adnagulov et al., 2001), but there are references in some earlier publications (Gorobeiko, 1994). Turtles inhabit the middle and lower Bidzhan River about 160 km upstream of its mouth. Perhaps the turtles live in other adjacent rivers and in other parts of the Russian Far East (Zeya and Bureya Rivers, Amurskaya Oblast') that should be confirmed by special surveys.

Recent *P. sinensis* distribution depends on two main factors: suitable climatic conditions and alluvial accumulations. Recent turtles' populations may be divided into two groups according their hydrological and geomorpho-

logical features as well as their habitat in plain streams (Nos. 1, 2, 5, 6, and 7) or semi-mountain (Nos. 3 and 4).

In some plain biotopes (e.g., Bidzhan River) up to 7 habitats were discovered, which are of the most serious importance for *P. sinensis* in both aquatic (overwintering, feeding and migrating) and terrestrial (basking and breeding) life history (Adnagulov et al., 2001).

The number of turtles decreases in many areas due to illegal hunting of adult animals for sale and clutch destruction. In some locations the nesting sites (sand and gravel bars) are destroyed by excavation of ground for construction industry needs.

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