

THE DATA ON THE OBSERVATIONS OF THE EUROPEAN POND TURTLE (*EMYS ORBICULARIS* L.) AT THE NORTHERN EDGE OF ITS AREA IN LATVIA

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The European pond turtle *Emys orbicularis* L. is extremely rare species in Latvia, meeting on the northern border of its area. The given publication for the first time represents the full list of observations of *Emys orbicularis* in Latvia, registered by the authors during carried out research since 1985 until September 2007. In total have been registered 81 cases of observation of *Emys orbicularis* in Latvia.

Key words: Testudines; Emydidae, *Emys orbicularis*, distribution, Latvia

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INTRODUCTION

The European pond turtle *Emys orbicularis* L. is extremely rare species in Latvia, meeting on the northern border of its area. Now there are different opinions concerning the status of the given species in Latvia. The European pond turtle *Emys orbicularis* is officially put into the list of especially protected Latvian animals, specified in the document of the Cabinet of ministry of Latvia "Conditions on the list of especially protected species and limitedly used especially protected species" (Ministru kabinets 2000). Thus, in the Red Book of Latvia published in 2003 (Berzins 2003) *Emys orbicularis* is specified as already died out Latvian species, accordingly brought into 0 category. In the same book, it is underlined that reproduction of *Emys orbicularis* in Latvia is not ascertained within the decades.

There also are opinions that *Emys orbicularis*, observable in Latvia, could be brought by human for terrarium maintenance and then set free where adapted, but cannot be reproducing in Latvian climate (Silins and Lamsters 1934). There were noted many cases of *Emys orbicularis* capture in Latvia since 1820 until 1932, including a find of juvenile animal (Silins and Lamsters, 1934.). There also are publications about some cases of observation of this species in Latvia during the last years (Pupina and Pupins 1996, Pupins 2005, Meeske at all 2006, etc). Considering relatively large number of finds of *Emys orbicularis* in Latvia, existence of native population of *Emys orbicularis* in Latvia seems to be real. At the same time, available data about condition of *Emys orbicularis* population in Latvia is insufficient, now it is not authentically known about any constant population of *Emys orbicularis* in Latvia.

Undoubtedly, this species, in connection with its rarity in Latvia demands further research on its distribution. The given publication for the first time represents the full list of finds of *Emys orbicularis* in Latvia, registered by the authors during carried out research since 1985 until September 2007.

MATERIALS AND METHODS

Research has begun in 1985 and will continue in the future. This publication reflects data about distribution of *Emys orbicularis* in Latvia, received by the authors until September 2007. The research took place all over the Latvian territory. If the messages on finds of *Emys orbicularis* were received, the given territories were surveyed additionally.

In connection with extremely low number of *Emys orbicularis* in Latvia the given research on distribution of *Emys orbicularis* L. was carried out by interrogation of Latvian inhabitants. There have been interrogated the following target groups of inhabitants: Zoo visitors; professionals, whose activity is connected with the nature (foresters, the inspector of wildlife management, hunters, etc.); inhabitants of areas where *Emys orbicularis* were seen earlier; readers of specialized editions about the nature, etc. The general number of interrogated people is more than 30000, taking into consideration TV and radio audience. The head method of interrogation since 1985 was oral interview. Also, radio and TV were used. From 2005 in addition to interviews and independently was carried out questioning by specially published questionnaires-booklets "Search for *Emys orbicularis* in Latvia" (Lidaka et al. 2005). For increase of validity of received data, the questionnaires included questions and recommendations for inhabitants about observation of *Emys orbicularis* in the nature and photos of characteristic attributes of *Emys orbicularis*: appearance, traces on sand; also photos of two exotic species of turtles most often imported into Latvia.

In case of receiving positive result at questioning, also was carried an additional oral interview about details of observation with the respondent. This interview included three consecutive stages.

1. stage. Question about observation of *Emys orbicularis* by the respondent in Latvian nature.

2. stage. In case of the positive answer to this question, there took place the check of its validity by presenting several color photos of *Emys orbicularis* L. and photos of imported by pet-shops to Latvia exotic turtles *Trachemys scripta elegans* and *Agrionemys horsfieldi* for an identification.

3. stage. In case of acknowledgement of reliability, took place the developed interview for acknowledgement of validity and receiving additional information:

3.1. Time data: In which year the observation took place; during what time (the season, if possible month and date), during what time of day, how long did the observation proceed, did the observation repeat or not, etc.

3.2. Geographical data: In what area of Latvia *Emys orbicularis* was observed; name of the nearest reservoir; name of nearest settlement, other local names of the nearest geographical objects, the nearest roads, etc.

3.3. External view data: The approximate size of a turtle; color of carapace, plastron, neck, head and extremities; presence of damages on the armor

3.4. Ecological data: In which biotope was the turtle observed; preview of the biotope characteristic (character and quantity of vegetation, use of the given place by the human, boundary biotopes); the approximate characteristic of the nearest reservoirs (size, flowing ability, depth, vegetation, character and structure of coast, use by the human, etc.)

3.5. Ethological data: observable behavior of a turtle, its dynamics

At the consent of the respondent, his/her contact information was also specified (not specified in the given article).

Also, expertise of the specified places and biotopes of observation during expeditions to the places specified by respondents were carried out.

RESULTS

In this publication for the first time presented the full list of the data received by the authors about distribution of *Emys orbicularis* to Latvia during the research since 1982 until September 2007. There is specified range of data for each message. Reg. Number. Individual message registration number.

Plausibility. Specifies the plausibility of observation exactly species *Emys orbicularis*. There specified the following levels of plausibility. 4. - checked by authors or photo; 3. - observed by professional biologist; 2. - observed by respondent himself; 1. - observed not by respondent, but by other people. In cases 2-3 for increase of plausibility, in addition the respondent was shown a set of photos of turtles and offered to choose an animal observed by himself. Observation registered only in case of a correct choice. In connection with that, in practice, all observation, except of group 1, are authentic in a high degree.

Observation year. Specifies the year of *Emys orbicularis* observation. In case the respondent could not specify the year precisely, registered the average date of the time interval specified. Location. Specifies the place of observation, in some cases the biotope of find of *Emys orbicularis*. Size class. Because observers did not measure the sizes of observable *Emys orbicularis* in most cases, respondents were offered to compare the sizes of observed turtles to standards of length. Based on such comparisons were specified 4 classes of the length of carapace of observed turtles: 1. - smaller than 5 cm; 2. - 5-10 cm; 3. - 10-15 cm; 4. - more than 15 cm. In case the observable

animal was measured, the length of carapace is specified in cm.

Sex. Specified, if has been authentically determined during research.

Number of animals. Specify the quantity of simultaneously observed animals.

Observations frequency. Specify quantity of observations of turtles in the place according to the respondent words.

Observation time or season. Specify the season of *Emys orbicularis* observation. For some cases specified the exact date, if it is known.

Comments. Specify some data about concrete case of observation.

The list of observations of *Emys orbicularis* L. in Latvia, registered during 1982 till September, 2007

Reg. Number: 0001

Plausibility: 4 (checked by authors, photo). Observation year: 1984. Location: Daugavpils city, Sportu street, near to small Sunupe river, near ponds system. Size class: 4 (19.8 cm). Sex: female. Number of animals: 1. Observations frequency: 1. Observation time or season: late summer. Comments: found on the ground under bushes near ponds. Laying 12 eggs.

Reg. Number: 0002

Plausibility: 2. Observation year: 1978. Location: Daugavpils city, Stropu lake coast. Size class: 3. Sex: unknown. Number of animals: 2. Observations frequency: 1. Observation time or season: late summer. Comments: found on the potaceous field, under ground deep 10 cm by land potaceous works.

Reg. Number: 0003

Plausibility: 2. Observation year: 1982. Location: Sigulda district, Adazi, Jugu marsh, Lielais Jugezers lake. Size class: 2. Sex: unknown. Number of animals: 3. Observations frequency:

2. Observation time or season: spring. Comments: found in the water, in the pond.

Reg. Number: 0004

Plausibility: 4 (checked by authors). Observation year: 1995. Location: Daugavpils district, Skrudaliena region, Silene Nature park, Ricu lake, Priedaine base. Size class: 4 (16.5 cm). Sex: female. Number of animals: 1. Observations frequency: 1. Observation time or season: 20.07.1995. Comments: found in the water deep 1,5 m, by the diver.

Reg. Number: 0005

Plausibility: 2. Observation year: 1997. Location: Kraslava city, Perstena lake. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 3. Observation time or season: summer. Comments: found on the coast of the pond, in the water.

Reg. Number: 0006

Plausibility: 2. Observation year: 1982. Location: Daugavpils district, marsh near Beljani lake, near to Belorussia borders. Size class: 3. Sex: unknown. Number of animals: 2. Observations frequency: 3. Observation time or season: summer. Comments: found in marsh by hunters.

Reg. Number: 0007

Plausibility: 2. Observation year: 1989. Location: Daugavpils district, Visky city. Size class: 1. Sex: unknown. Number of animals: 3. Observations frequency: 1. Observation time or season: autumn. Comments: caught by the local man in the peat ponds.

Reg. Number: 0008

Plausibility: 2. Observation year: 1996. Location: Ventspils, Mauruciems, near to Zemsaka river. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found in the marsh forest on the land.

Reg. Number: 0009

Plausibility: 2. Observation year: 1985. Location: Ventspils, near Mauru marsh, near to sea. Size class: 3. Sex: unknown. Number of animals: 1.

Observations frequency: 2. Observation time or season: summer. Comments: found in the marsh.

Reg. Number: 0010

Plausibility: 1. Observation year: 1996. Location: Ventspils, near to Mauruciems city, Mauru marsh near to railway. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 2. Observation time or season: summer. Comments: found in the marsh near railway.

Reg. Number: 0011

Plausibility: 2. Observation year: 1996. Location: Liepaja district, Skrunda Liepaja road, Vitoli village turn left, Graudusi village. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found in the marsh forest.

Reg. Number: 0012

Plausibility: 1. Observation year: 1938. Location: Dobeles district, near to Apgulde city, Apgulde lake. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found on the road near to Apgulde road.

Reg. Number: 0013

Plausibility: 4 (photo). Observation year: 1997. Location: Dobeles district, near to Apgulde city, fish pond. Size class: 1 (4.4 cm). Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 27.07.1997. Comments: found on the coast of meliorative channel.

Reg. Number: 0014

Plausibility: 1. Observation year: 2004. Location: Riga city, Kisezers lake. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found on the coast.

Reg. Number: 0015

Plausibility: 4 (checked by authors, Fig.1., Fig.2.). Observation year: 2003. Location: Madona district, Jumurda region, Vestieni Inesi road, near Laci village, Vecais kapukalns. Size class: 4 (19.6 cm). Sex: female. Number of animals: 1.

Observations frequency: 1. Observation time or season: 21.07.2003. Comments: found on the road near fish pond. Laying 7 eggs in 2 days.

Reg. Number: 0016

Plausibility: 2. Observation year: 1983. Location: Daugavpils district, Skrudaliena area, Silene nature park, 2 km near to Ricu lake, in the forest. Size class: 3. Sex: unknown. Number of animals: 1 (died, carapax only). Observations frequency: 1. Observation time or season: autumn. Comments: found near to Nyctereus procionides hole.

Reg. Number: 0017

Plausibility: 2. Observation year: 1968. Location: Daugavpils district, Malinova region, Janciska village, pond near to former school. Size class: 3. Sex: unknown. Number of animals: 3. Observations frequency: 1. Observation time or season: November. Comments: observed by children under ice, water deep 20-30 cm, animals were active.

Reg. Number: 0018

Plausibility: 4 (checked by authors, Fig.3, Fig.4.). Observation year: 2004. Location: Daugavpils city, Jauna Forstate region, near to school #16. Size class: 4 (17.7 cm). Sex: B&. Colour: carapax black. Number of animals: 1. Observations frequency: 1. Observation time or season: 24.06.2005. Comments: found on the land.

Reg. Number: 0019

Plausibility: 2. Observation year: 2005. Location: Daugavpils city, Mezciems region. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found on the road in the forest.

Reg. Number: 0020

Plausibility: 2. Observation year: 1964. Location: Daugavpils district, Viski region, Visku lake, near to Macula. Size class: 4. Sex: unknown. Number of animals: 1. Observations frequency: 3. Observation time or season: summer. Comments: hunt by local people in water on the beach, on the coast, for the hitting by legs, sticks.

Reg. Number: 0021

Plausibility: 2. Observation year: 1996. Location: Daugavpils district, Viski region, Korolevscina village. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 3. Observation time or season: summer. Comments: observed in a little home pond in a time of some days.

Reg. Number: 0022

Plausibility: 2. Observation year: 1997. Location: Daugavpils city, Veca Forstate region, near Suna ezers lake. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: on the road near to railway.

Reg. Number: 0023

Plausibility: 1. Observation year: 1983. Location: Talsi district, Slitere region, Ruksupurs marsh. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: e"3. Observation time or season: unknown. Comments: in the marsh.

Reg. Number: 0024

Plausibility: 3. Observation year: 1985. Location: Talsi district, Slitere region, Petera lake. Size class: unknown. Sex: unknown. Number of animals: unknown. Observations frequency: no. Observation time or season: summer. Comments: observed many fishes bubbles.

Reg. Number: 0025

Plausibility: 3. Observation year: 1988. Location: Talsi district, Stende city, near to former Mineral fertilizers store, near to railway. Size class: 4. Sex: female. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: on the ground.

Reg. Number: 0026

Plausibility: 3. Observation year: 1989. Location: Talsi district, Pitragis region, near Pitraga river, on the road. Size class: 4 (17 cm). Sex: female. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: on the road near to Pitraga river.

Reg. Number: 0027

Plausibility: 3. Observation year: 2003. Location: Talsi district, Melnsils region, Baltic sea coast. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 07.2003. Comments: traces on the beach from the Baltic sea to the forest.

Reg. Number: 0028

Plausibility: 4. (photo). Observation year: 1972. Location: Jelgava city, Mezciems, near Vircava river. Size class: 4 (17 cm). Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 06.06.1972. Comments: on the old sawdust store. Laid 12 eggs.

Reg. Number: 0029

Plausibility: 4. (checked by authors, photo). Observation year: 2005. Location: Kraslava district, Dagda region, near Dzeguze river. Size class: 4 (17.3 cm). Sex: female. Number of animals: 1. Observations frequency: 1. Observation time or season: 06.06.1972. Comments: on the road near Dzeguze river.

Reg. Number: 0030

Plausibility: 4. (photo). Observation year: 1998. Location: Talsi district, Kolka region, Pitraga village, sea coast beach near to Pitraga river. Size class: 4 (18 cm). Sex: female. Number of animals: 1. Observations frequency: 1. Observation time or season: 28.07.1998. Comments: found on the sea beach.

Reg. Number: 0031

Plausibility: 3. Observation year: 1980. Location: Dobeles district, Ukri city, pond near to local school. Size class: 2 (7-8 cm). Sex: unknown. Number of animals: e"5. Observations frequency: 1. Observation time or season: summer. Comments: found by children after pond cleaning.

Reg. Number: 0032

Plausibility: 2. Observation year: 1985. Location: Ogre city, meliorative channel near to local canalisation cleaning ponds. Size class: 3. Sex:

unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found in the channel.

Reg. Number: 0033

Plausibility: 1. Observation year: 1986 -1989. Location: Jelgava city, Mezciems region, near Vircava river, the old sawdust store. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: e"2. Observation time or season: summer. Comments: found on the coast of Vircava river.

Reg. Number: 0034

Plausibility: 3. Observation year: 1968. Location: Daugavpils city, Kimiku region. Size class: 4 (19 cm). Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: a local boy found and show on the pet show.

Reg. Number: 0035

Plausibility: 3. Observation year: 1960. Location: Daugavpils district, Skrudaliena region, Silene Nature Park, Silupite river near road. Size class: unknown. Sex: unknown. Number of animals: unknown. Observations frequency: e"3. Observation time or season: summer. Comments: observed many fishes bubbles.

Reg. Number: 0036

Plausibility: 3. Observation year: 1981-1985. Location: Kuldiga city, near Venta river, former Vulkans wood factory sawdust store. Size class: 3. Sex: unknown. Number of animals: unknown. Observations frequency: e"3. Observation time or season: summer. Comments: on the old sawdust.

Reg. Number: 0037

Plausibility: 3. Observation year: 1986-1987. Location: Kuldiga city, Central pond. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: e"3. Observation time or season: summer. Comments: in the city pond for two years.

Reg. Number: 0038

Plausibility: 2. Observation year: 1989. Location: Daugavpils city, Rugeli region, Elektroinstrument fish ponds. Size class: 4. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: was caught, after 1 month returned to the nature.

Reg. Number: 0039

Plausibility: 2. Observation year: 2005. Location: Daugavpils district, Kalkune region, Celtnieks village, Tarzanka pond system. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: in the water.

Reg. Number: 0040

Plausibility: 2. Observation year: 2001. Location: Daugavpils city, Esplanade region, pond near new Daugavpils University. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: in the pond.

Reg. Number: 0041

Plausibility: 1. Observation year: 2000. Location: Saldus district, near Lasupe river, poad factory. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found carapax.

Reg. Number: 0042

Plausibility: 2. Observation year: 2002. Location: Saldus district, near Lasupe river, poad factory. Size class: 4. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 05.2002. Comments: children found the animal.

Reg. Number: 0043

Plausibility: 2. Observation year: 1996. Location: Kraslava district, Dagda region, Vorzovo village, small river, under the bridge. Size class: 4. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: spring. Comments: children found the animal in water.

Reg. Number: 0044

Plausibility: 1. Observation year: 1986. Location: Kraslava district, Dreidzs lake near Plocini village.

Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: in the lake. Published in local newspapers.

Reg. Number: 0045

Plausibility: 2. Observation year: 2006. Location: Dobeles district, Apgulde region, fish pond near to Apgulde lake. Size class: 2 (8 cm). Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 14.06.2006. Comments: on the wood placed in water.

Reg. Number: 0046

Plausibility: 2. Observation year: 2002. Location: Daugavpils district, Demene region, Mezi village, pond system. Size class: 2. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 07.2002. Comments: under stone in dry pond.

Reg. Number: 0047

Plausibility: 2. Observation year: 2001. Location: Daugavpils city, Jauna Forstate region, Sunu lake. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: after dog attack has dived into water.

Reg. Number: 0048

Plausibility: 2. Observation year: 2002. Location: Daugavpils city, Jauna Forstate region, Sunu lake coast. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found died animal.

Reg. Number: 0049

Plausibility: 2. Observation year: 2004. Location: Liepaja district, Nica region, road Nica - Lithuania, 2 km., turn left 3 km, in the forest. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: on the road.

Reg. Number: 0050

Plausibility: 2. Observation year: 1968. Location: Kuldiga district, Ranki region, Savinieki village,

near to former Ranku school, 3 km to Venta river. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: on the coast of time little pond.

Reg. Number: 0051

Plausibility: 1. Observation year: 1980. Location: Liepaja district, Aizpute region, Kalvene city, Podnieku lake. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: in the water.

Reg. Number: 0052

Plausibility: 2. Observation year: 2001. Location: Kraslava district, Kumbuli region, Ots lake, coast nearest to Kusini village. Size class: 1. (2.5-3 cm). Sex: unknown. Number of animals: 3. Observations frequency: 1. Observation time or season: August. Comments: in the water, 20 cm deep.

Reg. Number: 0053

Plausibility: 2. Observation year: 1996. Location: Kraslava district, Dagda region, road near to Kromani village. Size class: unknown. Sex: unknown. Number of animals: 3. Observations frequency: 1. Observation time or season: summer. Comments: trace on the ground road.

Reg. Number: 0054

Plausibility: 2. Observation year: 2002. Location: Kraslava district, Dagda region, near to Kromani village, Dzeguze river. Size class: 15 cm. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: on the coast.

Reg. Number: 0055

Plausibility: 2. Observation year: 1998. Location: Kraslava district, Dagda region, near to Kromani village, Dzeguze river. Size class: 15 cm. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: early summer. Comments: in the fish net.

Reg. Number: 0056

Plausibility: 4. (checked by authors). Observation year: 2007. Location: Ventspils district, Ance region, Auzdarciems village, near Liepati village. Size class: 4 (17 cm). Sex: female. Number of animals: 1. Observations frequency: 1. Observation time or season: 03.06.2007. Comments: on the ground road in the damp forest.

Reg. Number: 0057

Plausibility: 1. Observation year: 2002. Location: Jekabpils city, Dambja street, pond near Justucuja house. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: on the pond coast.

Reg. Number: 0058

Plausibility: 1. Observation year: 2007. Location: Daugavpils city, Gubisce lake. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 21.06.2007. Comments: on the marsh coast near little bridge.

Reg. Number: 0059

Plausibility: 3. Observation year: 2004. Location: Cesis district, Gauja National park, Sudas marsh, Zviedru lake. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: swimming in the water.

Reg. Number: 0060

Plausibility: 2. Observation year: 1979. Location: Riga district, Kangari region, Kangaru marsh, Kangaru lake. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: caught.

Reg. Number: 0061

Plausibility: 2. Observation year: 2004. Location: Preili district, Aglona city, way to Jaunaglona city, former childrens garden territory, little pond. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 09.2004. Comments: on the coast, sun day.

Reg. Number: 0062

Plausibility: 2. Observation year: 1977. Location: Preili district, Aglona city, former childrens garden territory. Size class: 3. Sex: unknown. Number of animals: 2. Observations frequency: 1. Observation time or season: ex situ. Comments: in children garden as a pets. Probably eggs laying.

Reg. Number: 0063

Plausibility: 2. Observation year: 1981. Location: Daugavpils district, Demene region, Dervanisku lake. Size class: 4. Sex: unknown. Number of animals: 2. Observations frequency: 1. Observation time or season: summer. Comments: by fish net on the 2 m. deep water, with many plants.

Reg. Number: 0064

Plausibility: 2. Observation year: 2007. Location: Riga district, Varnu krops village, near water cleaning ponds, on the road. Size class: 4. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 07.2007. Comments: on the road.

Reg. Number: 0065

Plausibility: 1. Observation year: 1980. Location: Kraslava district, Dagda region, Bronki village. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: some days, summer. Comments: found, lived at home as a pet.

Reg. Number: 0066

Plausibility: 2. Observation year: 1995. Location: Kuldiga district, Mezvalde region, Blaku ponds. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found by fishing.

Reg. Number: 0067

Plausibility: 3. Observation year: 2007. Location: Cesis district, Berzkrops village, near to Berzinu pond and Kondratu pond. Size class: 4. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: 08.2007. Comments: on the asphalt road.

Reg. Number: 0068

Plausibility: 1. Observation year: 1995. Location: Saldus district, Blidene city, small river, under bridge. Size class: 4. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: under bridge.

Reg. Number: 0069

Plausibility: 1. Observation year: 1977. Location: Saldus district, Blidene city. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: no.

Reg. Number: 0070

Plausibility: 1. Observation year: 1965. Location: Dobeles district, Biksti region, Upesmuiza village, Berze river, under bridge. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: children found under bridge.

Reg. Number: 0071

Plausibility: 1. Observation year: 1997. Location: Saldus district, Ezere city, Ezeres dzirnavu pond. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: unknown.

Reg. Number: 0072

Plausibility: 1. Observation year: 1967. Location: Dobeles district, Zebrene region, near to Berze river, Zalkaju fish pond. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: unknown.

Reg. Number: 0073

Plausibility: 1. Observation year: 1987. Location: Saldus district, Remte region, Saulisu marsh. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: unknown.

Reg. Number: 0074

Plausibility: 1. Observation year: 1987. Location: Saldus district, Remte region, Tirelu marsh. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: unknown.

Reg. Number: 0075

Plausibility: 1. Observation year: 1997. Location: Dobele district, Apgulde region, Apgulde lake, the road near to lake. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: on the road.

Reg. Number: 0076

Plausibility: 1. Observation year: 1997. Location: Dobele district, Apgulde region, Apgulde lake. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: on the lake bridge.

Reg. Number: 0077

Plausibility: 2. Observation year: 1987. Location: Dobele district, Apgulde region, meliorateve channel near to Apgulde lake. Size class: unknown. Sex: unknown. Number of animals: 2. Observations frequency: 1. Observation time or season: unknown. Comments: on the channel coast.

Reg. Number: 0078

Plausibility: 4. (checked by authors). Observation year: 1988. Location: Dobele district, Apgulde region, meliorateve channel near to Apgulde lake. Size class: 3. Sex: unknown. Number of animals: 3. Observations frequency: 1. Observation time or season: summer. Comments: on the channel coast.

Reg. Number: 0079

Plausibility: 2. Observation year: 2002. Location: Aizkraukle city, Zvaidznu channel near to Plaviny basin. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: on the channel coast.

Reg. Number: 0080

Plausibility: 1. Observation year: 1992. Location: Talsi district, Vaides pond, near to sea. Size class: unknown. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: unknown. Comments: fish pond.

Reg. Number: 0081

Plausibility: 2. Observation year: 1975. Location: Liepaja district, Barta region, near to Slamsti village. Size class: 3. Sex: unknown. Number of animals: 1. Observations frequency: 1. Observation time or season: summer. Comments: found by driver.

In total have been registered 81 cases of observation of *Emys orbicularis* in Latvia in present research since 1982 until 09.2007.

DISCUSSION

On the plausibility of the received data. Undoubtedly, obtained data is not absolutely precise regarding chronology as, in some cases respondents specified a time interval of observation only. In some cases, respondents also could not name of a place of observation correctly, being limited to the area in the sub quadrant. At the same time, considering small density of *Emys orbicularis* population in Latvia and features of its ecology and ethology, we consider that the method of interrogation of the population is effective for a tentative estimation of *Emys orbicularis* distribution in Latvia and especially for precursory detection of small cryptic groups hardly found by other methods.

The factor, able to lower the plausibility of messages of respondents, there could be respondents not realized desire to give situationally socially approved affirmative answer to a question on observation of *Emys orbicularis* in Latvia. For preventive it, the methods of interrogation were created with participation of the professional psychologist, the precursory conversation and interrogation were also carried out with its participation.



Fig.1. *Emys orbicularis* female, carapax. Latvia, Madona district, Jumurda region. Photo: M.Pupins.



Fig.2. *Emys orbicularis* female, plastron. Latvia, Madona district, Jumurda region. Photo: M.Pupins.

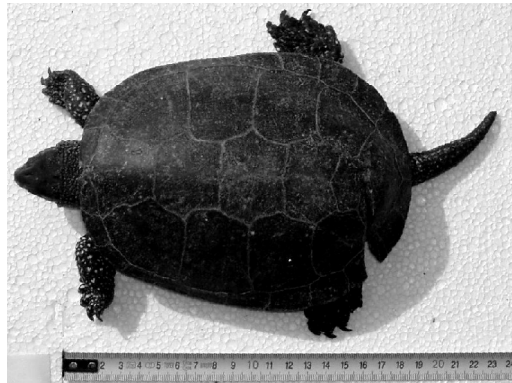


Fig.3. *Emys orbicularis* male, carapax. Latvia, Daugavpils. Photo: M.Pupins.



Fig.4. *Emys orbicularis* male, plastron. Latvia, Daugavpils. Photo: M.Pupins.

In general, plausibility of the received data is represented as high and appropriate to the mission of the research, that specify received for a number of registered observations repeated acknowledgement from independent sources (other respondents, workers of Riga Zoo etc).

During the research, there were not authentically found any stable populations of a pond turtle in Latvia. The analysis of the data received in research allows to designate areas of Latvia, potentially able to contain local stable groups of *Emys orbiculari*. with numerous observations

of turtles during several years (Dobele district, Apgulde area). Also, potential area of dwelling of turtles is the southeast of Latvia, Daugavpils and Kraslava districts and separate potential territory on the northwest of Latvia.

The given research proceeds. The received data is used for the further studying of distribution,

condition of population and ecology of *Emys orbicularis* in Latvia.

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