

„Apdraudētas sugas Latvijā: uzlabotas zināšanas un kapacitāte, informācijas aprīte un izpratne”
(Projekta Nr. LIFE19 GIE/LV/000857)



Seminārs “Abinieku un rāpuļu aizsardzība”

2023. gada 14. decembris

Rīgas Nacionālais zooloģiskais dārzs, Meža prospekts 1, Rīga



Sarkanvēdera ugunskrupja un purvu bruņurupuča populāciju atjaunošanas un aizsardzības projektu rezultāti

14.12.2023. 11:25 – 11:45

Sadarbībā:

Andris Čeirāns

Mihails Pupiņš

Daugavpils Universitāte

Latgales zoodārzs



12/16/2023



Latgales zoodārza funkcijas un Eo Bb Latvijā



HA



Latgales zoodārza funkcijas un Eo Bb Latvijā



Dzīvnieku aizsardzības likums

18) **zooloģiskais dārzs** – pastāvīga vieta, kur savvaļas sugu dzīvnieki tiek turēti izstādīšanai publiskas apskatei septiņas vai vairāk dienas gadā, **sugu saglabāšanas, pavairošanas, reintrodukcijas, pētniecības un sabiedrības izglītošanas nolūkā.**

Ministru kabineta noteikumi Nr. 1033
Pieņemti 2010. gada 9. novembrī (prot. Nr. 59 10. §)

Prasības savvaļas sugu dzīvnieku turēšanai zooloģiskajā dārzā un prasības zooloģiskā dārza izveidošanai un reģistrācijai



Zinātne

4.3.1. **pasākumi** par dzīvnieku sugām un informācijas **apmaiņu** attiecībā uz sugu saglabāšanu, audzēšanu nebrīvē, populāciju atjaunošanu vai sugu reintrodukciju;

Dabas aizsardzība

4.3.3. piedalīšanās savvaļas dzīvnieku **paši apdraudēto dzīvnieku sugu saglabāšanas** un reintrodukcijas programmās un vairošanā nebrīvē;

Ekoloģiskā audzināšana

4.3.6. pasākumi, kas veicina sabiedrības **vides izglītību un ekoloģiskās apziņas** veidošanu, kā arī sniedz informāciju par eksponētajām dzīvnieku sugām un to dabisko dzīvotāji;

Latgales zoodārza nolikums

II. Iestādes darbības mērķis funkcijas, uzdevumi un tiesības

7. Iestādes darbības mērķis ir **sabiedrības izglītošana** vides un ekoloģiskās kultūras jomā, faunas sugu eksponēšana, zookultūra, **izpēte un dabas aizsardzība**

HA



Latgales zoodārza funkcijas un Eo Bb Latvijā



Dzīvnieku aizsardzības likums

18) **zooloģiskais dārzs** – pastāvīga vieta, kur savas savas sugu dzīvnieki tiek turēti izstādīšanai publiskai apskatei septiņas vai vairāk dienas gadā, **sugas saglabāšanas, pavairošanas, reintrodukcijas, pētniecības un sabiedrības izglītošanas nolūkā.**

Ministru kabineta noteikumi Nr.1033
Pieņemti 2010.gada 9.novembrī (prot. Nr.59 10.9)

Prasības savas sugu dzīvnieku turēšanai zooloģiskajā dārzā un prasības zooloģiskā dārza izveidošanai un reģistrācijai



Zinātne

4.3.1. **nodrošināt** dzīvnieku sugām un informācijas **apmaiņu** attiecībā uz sugu saglabāšanu, pavairošanu, populāciju atjaunošanu vai sugu reintrodukciju;

Dabas aizsardzība

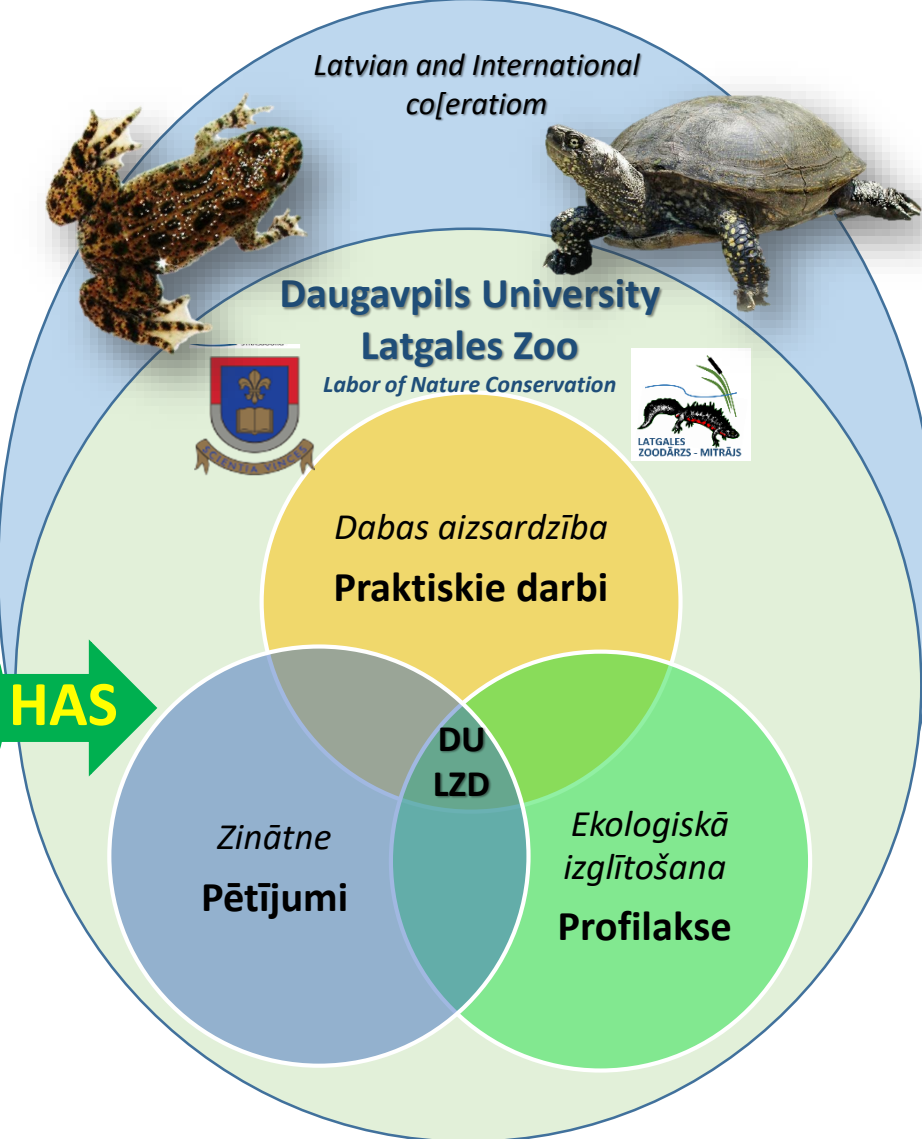
4.3.3. piedalīšanās savas dzīvnieku **sugas apdraudēto dzīvnieku sugu saglabāšanas** un reintrodukcijas programmās un vairošanā nebrīvē;

Ekoloģiskā audzināšana

4.3.4. veikt pasākumus, kas veicina sabiedrības **vides izglītību un ekoloģiskās apziņas** veidošanu, kā arī nodrošināt informāciju par dzīvnieku turēšanu un to dabisko dzīvotājus;

Latgales zoodārza nolikums

II. Iestādes darbības mērķis funkcijas, uzdevumi un tiesības
7. Iestādes darbības mērķis ir **sabiedrības izglītošana** vides un ekoloģiskās kultūras jomā, faunas sugu eksponēšana, zookultūra, **izpēte un dabas aizsardzība**





Latgales zoodārza funkcijas un Eo Bb Latvijā



Dzīvnieku aizsardzības likums

18) **zooloģiskais dārzs** – pastāvīga vieta, kur savas savas dzīvnieki tiek turēti izstādīšanai publiskai apskatei septiņas vai vairāk dienas gadā, **tas saglabāšanas, pavairošanas, reintrodukcijas, pētniecības un sabiedrības izglītošanas nolūkā.**

Ministru kabineta noteikumi Nr.1033
Pieņemti 2010.gada 9.novembrī (prot. Nr.59 10.9)

Prasības savas sugu dzīvnieku turēšanai zooloģiskajā dārzā un prasības zooloģiskā dārza izveidošanai un reģistrācijai



Zinātne

4.3.1. **zoos** dar dzīvnieku sugām un informācijas apmaiņai attiecībā uz sugu saglabāšanu, pavairošanu, populāciju atjaunošanu vai sugu reintrodukciju;

Dabas aizsardzība

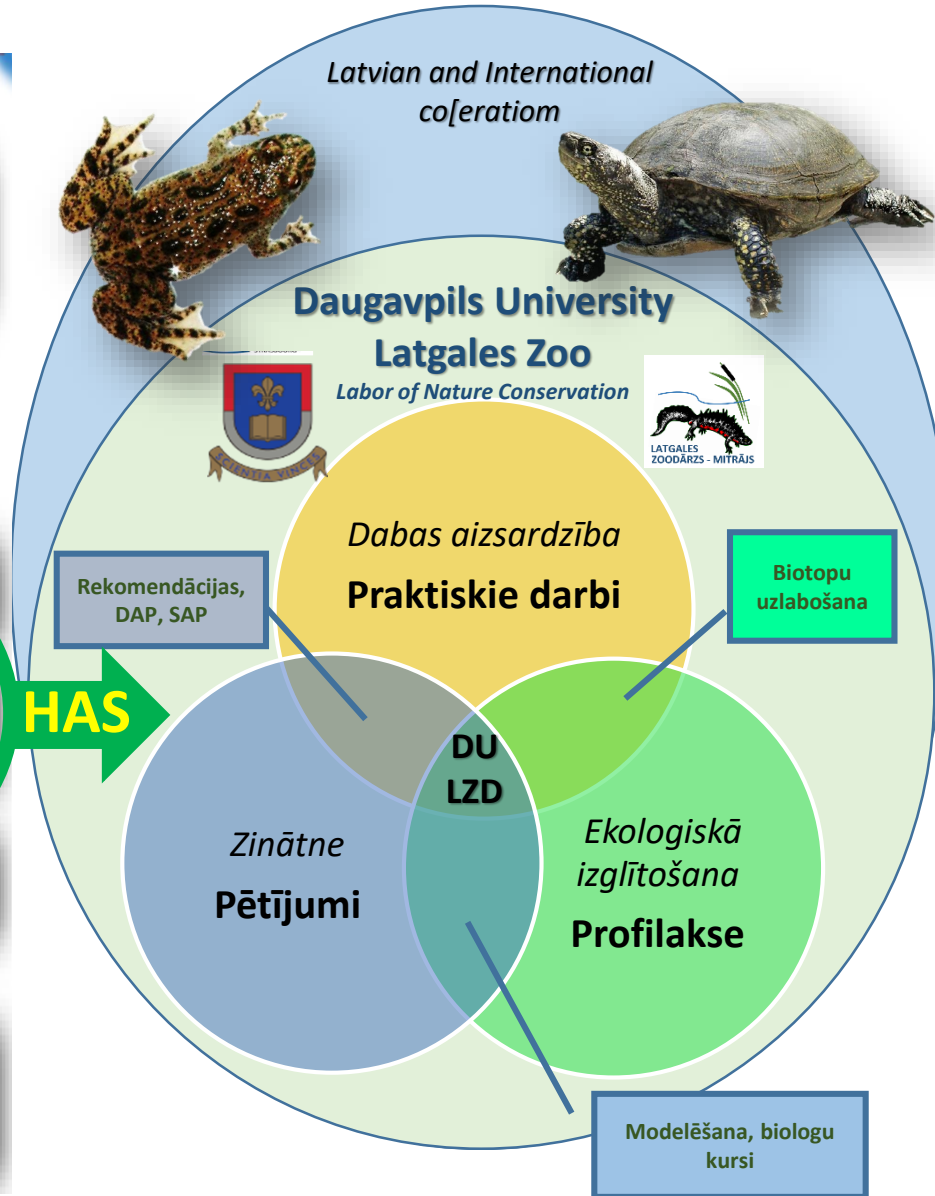
4.3.3. piedalīšanās savas dzīvnieku **pasī apdraudēti dzīvnieku sugu saglabāšanas un reintrodukcijas** programmās un vairošanā nebrīvē;

Ekoloģiskā audzināšana

4.3.4. pasākumi, kas veicina sabiedrības **vides izglītību un ekoloģiskās apziņas** veidošanu, kā arī nodrošina informāciju par dzīvnieku turēšanu un to dabisko dzīvotāji;

Latgales zoodārza nolikums

II. Iestādes darbības mērķis funkcijas, uzdevumi un tiesības
7. Iestādes darbības mērķis ir **sabiedrības izglītošana** vides un ekoloģiskās kultūras jomā, faunas sugu eksponēšana, zookultūra, **izpēte un dabas aizsardzība**



4D-AI Eo Bb Aizsardzības Stratēģija LZD-DU



IZPĒTE

Eo Bb lauka pētījumi

- Izplatība un skaits (monitorings)
- Populāciju stāvoklis (monitorings)
- Ekoloģija un etoloģija (monitorings)
- + *Paraugu ņemšana*

Eo Bb laboratorijas pētījumi

- DNS analīze (izcelsme, ekoloģijā)
- Zookultūru tehnoloģijas

Eo Bb matemātiskie pētījumi

- Statistika (datu analīze)
- Modelēšana (bioklimatiskā, cilvēku ietekme, ekoloģiskā, saistošo sugu utt.)

IZSTRĀDE

Eo Bb aizsardzības plānu izstrāde

- Sugu aizsardzības plānu izstrāde (Eo Bb)
- Dabas aizsardzības plānu izstrāde (mērķa sugas)
- Dabas aizsardzības plānu izstrāde (integrācija)

Eo Bb populāciju aizsardzības plānošana

- Populāciju uzlabošanas plānu izstrāde
- Biotopu optimizācijas plānu izstrāde
- Darbu tehniskās specifikācijas izstrāde

IZPILDE

In-Situ

- Biotopu optimizācija
- Populāciju uzlabošana
- Koridoru izveide
- + invazīvo sugu profilakse

Ex-situ

- Pavairošana zookultūrā
- Audzēšana zookultūrā

IZPLATĪŠANA UN IZGLĪTOŠANA

Zinātniskā verifikācija

Zinātniskie raksti (Q1-Q2>50%)
Zinātniskās konferences (EU, World)
Zinātniskie tiki (EU, World)

Speciālistu apmācība

Biologu apmācība (Lauka pētījumi)
Biologu apmācība (Bioekonomika)
Integrācija biologu citosursos
Mācību papildus līdzekļi

Informācija specialistiem

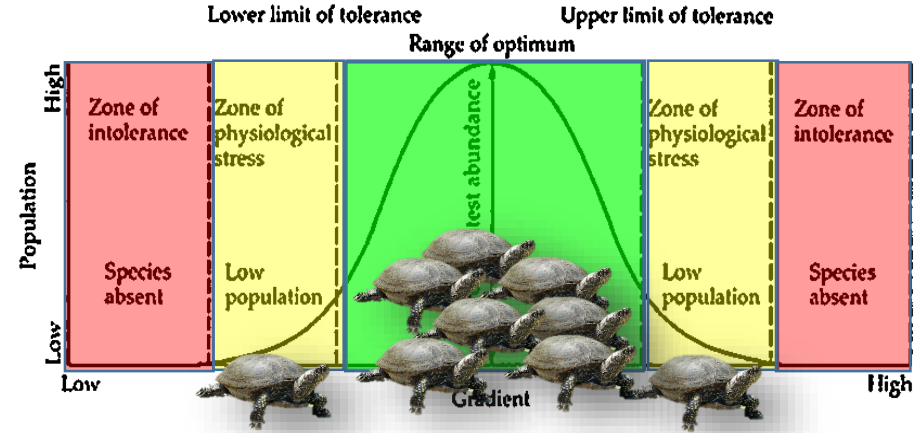
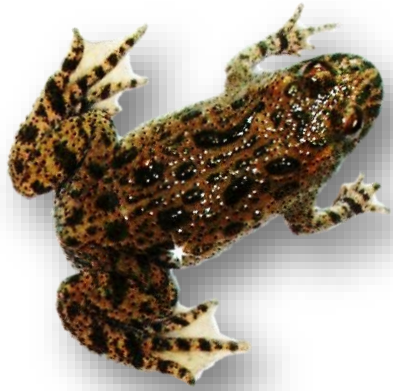
Sugu aizsardzības plāni (Eo Bb)
Dabas aizsardzības plāni
Projektu tehniskā dokumentācija
Projektu atskaites

Informācija publikai

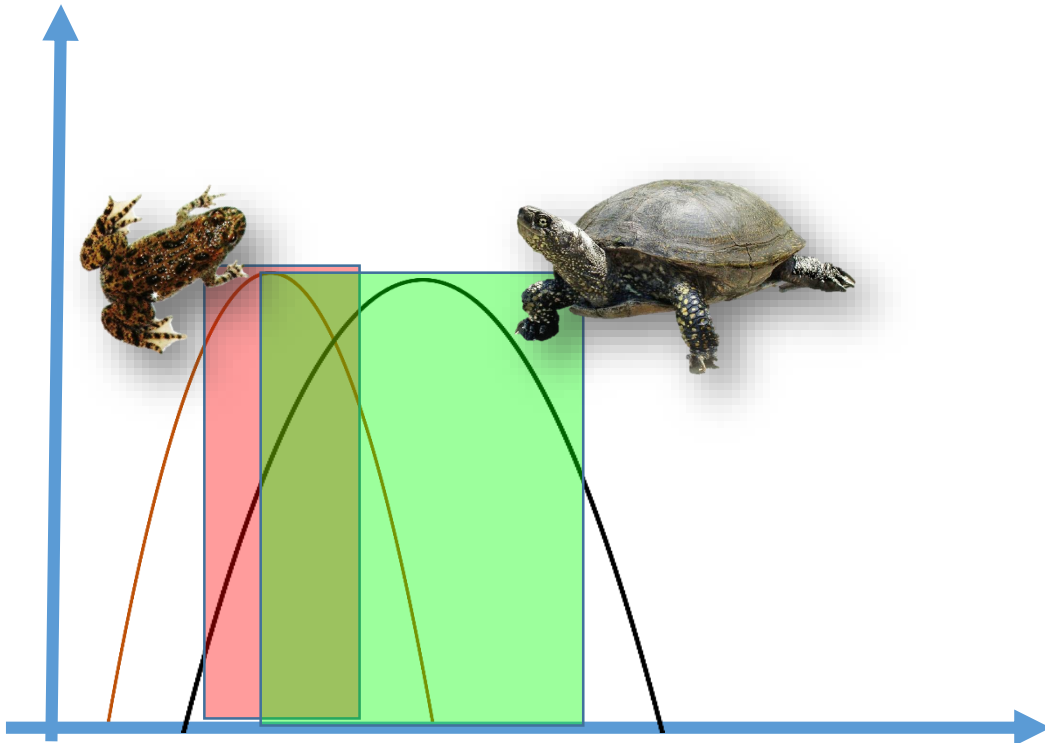
Grāmatas un brošūras
Web-saiti un sociālie tiki
Mass-media (radio, TV, avīzes)
Stendi un QR-stendi
IT MI mobilā aplikācija



Eo Bb biotopu un populāciju uzlabošanas principi LZD-DU



■ **FIGURE 7.2** Organismal distribution along a physical gradient. (Modified from Cox, Healey, and Moore 1976.)



Eo Bb Projekti Latvijā 1984~. – 2009.

1.Eo

Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS* IN LATVIA

Acronym: "Emys-Latvia"

Registration number: none

Status of the project: private background project

Territory of the project: the whole territory of Latvia, the project is being realized more actively in the south-eastern part of Latvia (all Latgale, old Selia, Daugavpils and Daugavpils novads, border zone with Belarus and Lithuania), where the authors and executives of the project live.

Project duration: 1984 – present – future

Source for funding: conservationists' private funds

Project activities and main results: The main task of the background project Emys-Latvia is permanent implementation of small activities necessary for study and conservation of *Emys orbicularis* in Latvia that are not financially supported at the moment by other projects, as well as ensuring succession of such projects. Therefore, this private project includes basic activities on study and conservation of *Emys orbicularis* in Latvia that are not carried out by other projects at the moment, but that could not be interrupted between the projects and in years decades: 1)



Fig. 1. 1984 *Emys orbicularis* female, found in 1984 in Daugavpils (Photo: 1998)



Fig. 2. 1987 *Emys orbicularis* female, found in 1987 in Daugavpils (Photo: 1998)

Eo Bb Projekti Latvijā 1984~. – 2009.

1.Eo

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Fig. 1. *Emys orbicularis* Gaude, found in 1984 in Daugavpils (Photo: 1998)



Fig. 2. *Emys orbicularis* Gaude, found in 1994 in Daugavpils. Being for 20 years in a zoo (Photo: 2007)



Latvijas
vides
aizsardzības
fonds

2.Eo

Full title of the project: RESEARCH OF POND TURTLE (*EMYS ORBICULARIS* L.) ECOLOGY IN LATVIA [Latvijas purva bruņurupuča (*Emys orbicularis* L.) ekoloģijas izpēte]

Registration number: 1-08/470/2000

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2001

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: In the course of the project the following actions took place: 1) establishing of basins for keeping of breeding group of *Emys orbicularis*, 2) field researches in the places of findings of *Emys orbicularis* in Latvia.

Consequently, it resulted in the following: 1) 23 biotopes of the places of findings in Latvia were described; 2) internal and external basins for breeding group were created; 3) some important peculiarities of ecology and needs of *Emys orbicularis* under their keeping in regulated conditions indoor and in natural climatic conditions of Latvia were studied (Pupinsh & Pupina 2005).



Eo Bb Projekti Latvijā 1984~. – 2009.

1.Eo

Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS* IN LATVIA

Acronym: "Emys-Latvia"

Registration number: none

Status of the project: private background project

Territory of the project: the whole territory of Latvia, the project is being realized more actively in the south-eastern part of Latvia (all Latgale, old Selia, Daugavpils and Daugavpils novads, border zone with Belarus and Lithuania), where the authors and executives of the project live.

Project duration: 1984 – present – future

Source for funding: conservationists' private funds

Project activities and main results: The main task of the background project Emys-Latvia is permanent implementation of small activities necessary for study and conservation of *Emys orbicularis* in Latvia that are not financially supported at the moment by other projects, as well as ensuring succession of such projects. Therefore, this private project includes basic activities on study and conservation of *Emys orbicularis* in Latvia that are not carried out by other projects at the moment, but that could not be interrupted between the projects and in years decades: 1)



Fig. 1. *Emys orbicularis* Gaude, found in 1914 in Daugavpils (Photo: 1978)



Fig. 2. *Emys orbicularis* Gaude, found in 1914 in Daugavpils. Being for 78 years in an enclosure (Photo: 2007)



Full title of the project: RESEARCH OF POND TURTLE (*EMYS ORBICULARIS* L.) ECOLOGY IN LATVIA [Latvijas purva bruņurupuča (*Emys orbicularis* L.) ekoloģijas izpēte]

Registration number: 1-08/470/2000

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2001

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: In the course of the project the following actions took place: 1) establishing of basins for keeping of breeding group of *Emys orbicularis*, 2) field researches in the places of findings of *Emys orbicularis* in Latvia.

Consequently, it resulted in the following: 1) 23 biotopes of the places of findings in Latvia were described; 2) internal and external basins for breeding group were created; 3) some important peculiarities of ecology and needs of *Emys orbicularis* under their keeping in regulated conditions indoor and in natural climatic conditions of Latvia were studied (Pupinsh & Pupina 2005).



2.Eo



Full title of the project/its part: DEVELOPMENT OF BROCHURE "LOOKING FOR POND TURTLE IN LATVIA" [Meklējam purva bruņurupci Latvijā]

Registration number: KK-12.2-5.3/25

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2005

Source for funding: Latvian Environmental Protection Fund Administration

Conservation project responsible: Riga National Zoo

In the result of the project: 1) some new communications about findings of *Emys orbicularis* in Latvia were received from the target groups of residents; 2) the level of awareness of population of Latvia, especially target groups, about *Emys orbicularis* and about actions that one should take encountering it in nature was increased; 3) in general, attitude of residents towards *Emys orbicularis* became more positive; 4) population was taught how to act in cases of finding of exotic turtles in nature of Latvia. The effect will be resulted in next projects.



3.Eo

Eo Bb Projekti Latvijā 1984~. – 2009.

1.Eo

Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS* IN LATVIA



2.Eo

Full title of the project: RESEARCH OF POND TURTLE (*EMYS ORBICULARIS* L.) ECOLOGY IN LATVIA [Latvijas purva bruņurupuča (*Emys orbicularis* L.) ekoloģijas izpēte]

Registration number: 1-08/470/2000
Status of the project: governmental structures of Latvia supported project
Territory of the project: whole territory of Latvia
Project duration: 2001
Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: In the course of the project the following actions took place: 1) establishing of basins for keeping of breeding group of *Emys orbicularis*, 2) field researches in the places of findings of *Emys orbicularis* in Latvia.

Consequently, it resulted in the following: 1) 23 biotopes of the places of findings in Latvia were described; 2) internal and external basins for breeding group were created; 3) some important peculiarities of ecology and needs of *Emys orbicularis* under their keeping in regulated conditions indoor and in natural climatic conditions of Latvia were studied (Pupinsh & Pupina 2005).



3.Eo



Full title of the project/its part: DEVELOPMENT OF BROCHURE "LOOKING FOR POND TURTLE IN LATVIA" [Meklējam purva bruņurupci Latvijā]

Registration number: KK-12.2-5.3/25
Status of the project: governmental structures of Latvia supported project
Territory of the project: whole territory of Latvia
Project duration: 2005
Source for funding: Latvian Environmental Protection Fund Administration
Conservation project responsible: Riga National Zoo

In the result of the project: 1) some new communications about findings of *Emys orbicularis* in Latvia were received from the target groups of residents; 2) the level of awareness of population of Latvia, especially target groups, about *Emys orbicularis* and about actions that one should take encountering it in nature was increased; 3) in general, attitude of residents towards *Emys orbicularis* became more positive; 4) population was taught how to act in cases of finding of exotic turtles in nature of Latvia. The effect will be resulted in next projects.



4.Eo Bb

Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS*, *BOMBINA BOMBINA*, *DYTISCUS LATISSIMUS* IN LATVIA [Purva bruņurupuču, sarkanvēdera ugunskrupju, plato ūdensvaboļu ekoloģijas pētīšana un aizsardzība Latvijā]

Registration number: 1-08/30/2006
Status of the project: governmental structures of Latvia supported project
Territory of the project: whole territory of Latvia
Project duration: 2006
Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main target activities of the project were field expeditions to the places of findings of *Emys orbicularis*. As a result: 1) communications about findings of *Emys orbicularis* in Latvia were verified (Meeske et al. 2006); 2) some biotopes of *Emys orbicularis* in Latvia were investigated and described; 3) probable threats for *Emys orbicularis* in the investigated biotopes in Latvia were described; 4) technology of zooculture was developed (Pupins 2007b).



Eo Bb Projekti Latvijā 1984~. – 2009.

1.Eo

Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS* IN LATVIA

Acronym: "Emys-Latvia"

Registration number: none

Status of the project: private background project

Territory of the project: the whole territory of Latvia, the project is being realized more actively in the south-eastern part of Latvia (all Latgale, old Selia, Daugavpils and Daugavpils novads, border zone with Belarus and Lithuania), where the authors and executives of the project live.

Project duration: 1984 – present – future
Source for funding: conservationists' private funds

Project activities and main results: The main task of the background project Emys-Latvia is permanent implementation of small activities necessary for study and conservation of *Emys orbicularis* in Latvia that are not financially supported at the moment by other projects, as well as ensuring succession of such projects. Therefore, this private project includes basic activities on study and conservation of *Emys orbicularis* in Latvia that are not carried out by other projects at the moment, but that could not be interrupted between the projects and in years decades: 1)



Fig. 1. 1984. *Emys orbicularis* Gaude, found in 1984 in Daugavpils (Photo: 1984)



Fig. 2. 1987. *Emys orbicularis* Gaude, found in 1987 in Daugavpils. Being for 28 years in an enclosure (Photo: 1987)



Full title of the project: RESEARCH OF POND TURTLE (*EMYS ORBICULARIS* L.) ECOLOGY IN LATVIA [Latvijas purva bruņurupuča (*Emys orbicularis* L.) ekoloģijas izpēte]

Registration number: 1-08/470/2000

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2001

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: In the course of the project the following actions took place: 1) establishing of basins for keeping of breeding group of *Emys orbicularis*, 2) field researches in the places of findings of *Emys orbicularis* in Latvia.

Consequently, it resulted in the following: 1) 23 biotopes of the places of findings in Latvia were described; 2) internal and external basins for breeding group were created; 3) some important peculiarities of ecology and needs of *Emys orbicularis* under their keeping in regulated conditions indoor and in natural climatic conditions of Latvia were studied (Pupinsh & Pupina 2005).



2.Eo



Full title of the project/its part: DEVELOPMENT OF BROCHURE "LOOKING FOR POND TURTLE IN LATVIA" [Meklējam purva bruņurupci Latvijā]

Registration number: KK-12.2-5.3/25

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2005

Source for funding: Latvian Environmental Protection Fund Administration

Conservation project responsible: Riga National Zoo

In the result of the project: 1) some new communications about findings of *Emys orbicularis* in Latvia were received from the target groups of residents; 2) the level of awareness of population of Latvia, especially target groups, about *Emys orbicularis* and about actions that one should take encountering it in nature was increased; 3) in general, attitude of residents towards *Emys orbicularis* became more positive; 4) population was taught how to act in cases of finding of exotic turtles in nature of Latvia. The effect will be resulted in next projects.



3.Eo



Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS*, *BOMBINA BOMBINA*, *DYTISCUS LATISSIMUS* IN LATVIA [Purva bruņurupuču, sarkanvēdera ugunkrupju, plato ūdensvaboļu ekoloģijas pētīšana un aizsardzība Latvijā]

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Territory of the project: whole territory of Latvia

Project duration: 2006

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Project activities and main results: The main target activities of the project were field expeditions to the places of findings of *Emys orbicularis*. As a result: 1) communications about findings of *Emys orbicularis* in Latvia were verified (Meeske et al. 2006); 2) some biotopes of *Emys orbicularis* in Latvia were investigated and described; 3) probable threats for *Emys orbicularis* in the investigated biotopes in Latvia were described; 4) technology of zooculture was developed (Pupins 2007b).



4.Eo Bb



European Union

European Structural and Investment Funds

Full title of the project: SUPPORT TO REALISATION OF DAUGAVPILS UNIVERSITY DOCTORAL STUDIES [Atbalsts Daugavpils Universitātes doktora studiju īstenošanai]

Registration number: 2004/003/VPD1/ESF/PIAA/04/NP/3.2.3.1./0003/0065

Status of the project: governmental structures of Latvia supported project

Territory of the project: Daugavpils University

Project duration: 2004-2007

Source for funding: European Structural Funds

Project responsible: Daugavpils University



5.Eo Bb

Eo Bb Projekti Latvijā 1984~. – 2009.

1.Eo

Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS* IN LATVIA

Acronym: "Emys-Latvia"

Registration number: none

Status of the project: private background project

Territory of the project: the whole territory of Latvia, the project is being realized more actively in the south-eastern part of Latvia (all Latgale, old Selia, Daugavpils and Daugavpils novads, border zone with Belarus and Lithuania), where the authors and executives of the project live.

Project duration: 1984 – present – future
Source for funding: conservationists' private funds

Project activities and main results: The main task of the background project Emys-Latvia is permanent implementation of small activities necessary for study and conservation of *Emys orbicularis* in Latvia that are not financially supported at the moment by other projects, as well as ensuring succession of such projects. Therefore, this private project includes basic activities on study and conservation of *Emys orbicularis* in Latvia that are not carried out by other projects at the moment, but that could not be interrupted between the projects and in years decades: 1)



Fig. 1. 1984. *Emys orbicularis* Gaule, Latvijā 1984. (Daugavpils, P. 1998)



Fig. 2. 1982. *Emys orbicularis* Gaule, Latvijā 1982. (Daugavpils, P. 1998)



Full title of the project: RESEARCH OF POND TURTLE (*EMYS ORBICULARIS* L.) ECOLOGY IN LATVIA [Latvijas purva bruņurupuča (*Emys orbicularis* L.) ekoloģijas izpēte]

Registration number: 1-08/470/2000

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2001

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: In the course of the project the following actions took place: 1) establishing of basins for keeping of breeding group of *Emys orbicularis*, 2) field researches in the places of findings of *Emys orbicularis* in Latvia.

Consequently, it resulted in the following: 1) 23 biotopes of the places of findings in Latvia were described; 2) internal and external basins for breeding group were created; 3) some important peculiarities of ecology and needs of *Emys orbicularis* under their keeping in regulated conditions indoor and in natural climatic conditions of Latvia were studied (Pupinsh & Pupina 2005).



2.Eo



Full title of the project/its part: DEVELOPMENT OF BROCHURE "LOOKING FOR POND TURTLE IN LATVIA" [Meklējam purva bruņurupci Latvijā]

Registration number: KK-12.2-5.3/25

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2005

Source for funding: Latvian Environmental Protection Fund Administration

Conservation project responsible: Riga National Zoo

In the result of the project: 1) some new communications about findings of *Emys orbicularis* in Latvia were received from the target groups of residents; 2) the level of awareness of population of Latvia, especially target groups, about *Emys orbicularis* and about actions that one should take encountering it in nature was increased; 3) in general, attitude of residents towards *Emys orbicularis* became more positive; 4) population was taught how to act in cases of finding of exotic turtles in nature of Latvia. The effect will be resulted in next projects.



3.Eo



Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS*, *BOMBINA BOMBINA*, *DYTISCUS LATISSIMUS* IN LATVIA [Purva bruņurupuču, sarkanvēdera ugunskrupju, plato ūdensvaboļu ekoloģijas pētīšana un aizsardzība Latvijā]

Registration number: 1-08/30/2006

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2006

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main target activities of the project were field expeditions to the places of findings of *Emys orbicularis*. As a result: 1) communications about findings of *Emys orbicularis* in Latvia were verified (Meeske et al. 2006); 2) some biotopes of *Emys orbicularis* in Latvia were investigated and described; 3) probable threats for *Emys orbicularis* in the investigated biotopes in Latvia were described; 4) technology of zooculture was developed (Pupins 2007b).



4.Eo Bb



European Union
European Structural and Investment Funds

Full title of the project: SUPPORT TO REALISATION OF DAUGAVPILS UNIVERSITY DOCTORAL STUDIES [Atbalsts Daugavpils Universitātes doktora studiju īstenošanai]

Registration number: 2004/003/VPD1/ESF/PIAA/04/NP/3.2.3.1./0003/0065

Status of the project: governmental structures of Latvia supported project

Territory of the project: Daugavpils University

Project duration: 2004-2007

Source for funding: European Structural Funds

Project responsible: Daugavpils University



6.Bb



Projekts title: LIFE-Bombina "BOMBINA IN THE BALTIC REGION - MANAGEMENT OF FIRE-BELLIED TOADS IN THE BALTIC REGION".

Project Nr. LIFE04NAT/DE/000028.

Vadošais partneris Stiftung Naturschutz Schleswig-Holstein (Vācija).

Projekta laiks: 2004-2009.

Finansējums: LIFE programma.

Aktuālie rezultāti: tika optimizēti ugunskrupju biotopi un izlaisti jaunie ugunskrupji populāciju pastiprināšanai Silenes dabas parka.



Eo Bb Projekti Latvijā 1984~. – 2009.

1.Eo

Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS* IN LATVIA

Acronym: "Emys-Latvia"

Registration number: none

Status of the project: private background project

Territory of the project: the whole territory of Latvia, the project is being realized more actively in the south-eastern part of Latvia (all Latgale, old Selia, Daugavpils and Daugavpils novads, border zone with Belarus and Lithuania), where the authors and executives of the project live.

Project duration: 1984 – present – future

Source for funding: conservationists' private funds

Project activities and main results: The main task of the background project Emys-Latvia is permanent implementation of small activities necessary for study and conservation of *Emys orbicularis* in Latvia that are not financially supported at the moment by other projects, as well as ensuring succession of such projects. Therefore, this private project includes basic activities on study and conservation of *Emys orbicularis* in Latvia that are not carried out by other projects at the moment, but that could not be interrupted between the projects and in years decades: 1)



Fig. 1. 1984. *Emys orbicularis* Gaule, Latvija. ©1984 Daugavpils. (Photo: 1998)



Fig. 2. 1982. *Emys orbicularis* Gaule, Latvija. ©1982 Daugavpils. (Photo: 1998)



Full title of the project: RESEARCH OF POND TURTLE (*EMYS ORBICULARIS* L.) ECOLOGY IN LATVIA [Latvijas purva bruņurupuča (*Emys orbicularis* L.) ekoloģijas izpēte]

Registration number: 1-08/470/2000

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2001

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: In the course of the project the following actions took place: 1) establishing of basins for keeping of breeding group of *Emys orbicularis*, 2) field researches in the places of findings of *Emys orbicularis* in Latvia.

Consequently, it resulted in the following: 1) 23 biotopes of the places of findings in Latvia were described; 2) internal and external basins for breeding group were created; 3) some important peculiarities of ecology and needs of *Emys orbicularis* under their keeping in regulated conditions indoor and in natural climatic conditions of Latvia were studied (Pupinsh & Pupina 2005).



2.Eo



Full title of the project/its part: DEVELOPMENT OF BROCHURE "LOOKING FOR POND TURTLE IN LATVIA" [Meklējam purva bruņurupuci Latvijā]

Registration number: KK-12.2-5.3/25

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2005

Source for funding: Latvian Environmental Protection Fund Administration

Conservation project responsible: Riga National Zoo

In the result of the project: 1) some new communications about findings of *Emys orbicularis* in Latvia were received from the target groups of residents; 2) the level of awareness of population of Latvia, especially target groups, about *Emys orbicularis* and about actions that one should take encountering it in nature was increased; 3) in general, attitude of residents towards *Emys orbicularis* became more positive; 4) population was taught how to act in cases of finding of exotic turtles in nature of Latvia. The effect will be resulted in next projects.



3.Eo



Full title of the project: RESEARCH AND CONSERVATION OF *EMYS ORBICULARIS*, *BOMBINA BOMBINA*, *DYTISCUS LATISSIMUS* IN LATVIA [Purva bruņurupuču, sarkanvēdera ugunskrupju, plato ūdensvaboļu ekoloģijas pētīšana un aizsardzība Latvijā]

Registration number: 1-08/30/2006

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2006

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main target activities of the project were field expeditions to the places of findings of *Emys orbicularis*. As a result: 1) communications about findings of *Emys orbicularis* in Latvia were verified (Meeske et al. 2006); 2) some biotopes of *Emys orbicularis* in Latvia were investigated and described; 3) probable threats for *Emys orbicularis* in the investigated biotopes in Latvia were described; 4) technology of zooculture was developed (Pupins 2007b).



4.Eo Bb



European Union

European Structural and Investment Funds

Full title of the project: SUPPORT TO REALISATION OF DAUGAVPILS UNIVERSITY DOCTORAL STUDIES [Atbalsts Daugavpils Universitātes doktora studiju īstenošanai]

Registration number: 2004/003/VPD1/ESF/PIAA/04/NP/3.2.3.1./0003/0065

Status of the project: governmental structures of Latvia supported project

Territory of the project: Daugavpils University

Project duration: 2004-2007

Source for funding: European Structural Funds

Project responsible: Daugavpils University



5.Eo Bb



6.Bb

Projekts title: LIFE-Bombina "BOMBINA IN THE BALTIC REGION - MANAGEMENT OF FIRE-BELLIED TOADS IN THE BALTIC REGION".

Project Nr. LIFE04NAT/DE/000028.

Vadošais partneris Stiftung Naturschutz Schleswig-Holstein (Vācija).

Projekta laiks: 2004-2009.

Finansējums: LIFE programma.

Aktuālie rezultāti: tika optimizēti ugunskrupju biotopi un izlaisti jaunie ugunskrupji populāciju pastiprināšanai Silenes dabas parkā.



7.Bb



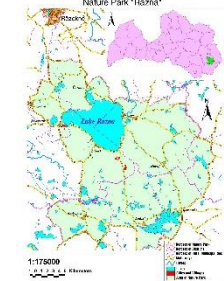
Project title: PROTECTION OF HABITATS AND SPECIES IN NATURE PARK RAZNA", "Nr. LIFE04NAT/LV/000199.

Projekta laiks: 2006.-2008.g.

Vadošais partneris Daugavpils Universitāte.

Finansējums: LIFE programma.

Rezultāti: ugunskrupji tika pavairoti izlaišanai dabā.





Latvijas
vides
aizsardzības
fonds

8.Eo Bb

Full title of the project: DEVELOPMENT OF PLAN OF CONSERVATION OF POND TURTLES *EMYS ORBICULARIS* (L.) [Purva bruņurupuču *Emys orbicularis* (L.) Sugas aizsardzības plāna izstrādāšana]

Registration number: 1-08/663/2006

Status of the project: governmental structures of Latvia supported project

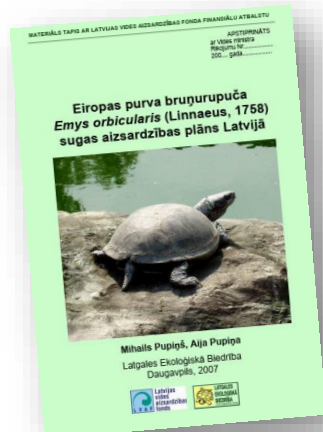
Territory of the project: whole territory of Latvia

Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) analysis and generalization of data about *Emys orbicularis* in Latvia (Pupins & Pupina 2008b); 2) development and discussion of the Plan on *Emys orbicularis* protection in Latvia. As a result of realization of the project: 1) the threats for *Emys orbicularis* in Latvia were analysed and ranged (Meeske & Pupins 2009); 2) concrete measures for conservation of *Emys orbicularis* in Latvia were proposed; 3) the Plan on *Emys orbicularis* protection in Latvia was developed, discussed, and officially accepted by the Ministry of Environment of Latvia and officially published by Nature conservation agency in a free access

Eo Bb Projekti Latvijā 2007. – 2021.



Full title of the project: DEVELOPMENT OF PLAN OF CONSERVATION OF POND TURTLES *EMYS ORBICULARIS* (L.) [Purva bruņurupuču *Emys orbicularis* (L.) Sugas aizsardzības plāna izstrādāšana]

Registration number: 1-08/663/2006

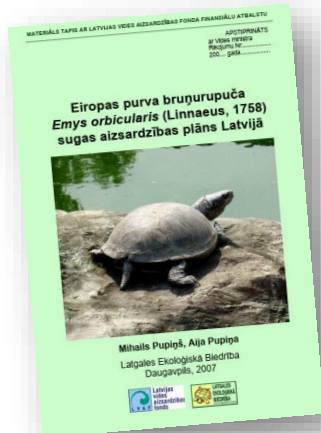
Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) analysis and generalization of data about *Emys orbicularis* in Latvia (Pupins & Pupina 2008b); 2) development and discussion of the Plan on *Emys orbicularis* protection in Latvia. As a result of realization of the project: 1) the threats for *Emys orbicularis* in Latvia were analysed and ranged (Meeske & Pupins 2009); 2) concrete measures for conservation of *Emys orbicularis* in Latvia were proposed; 3) the Plan on *Emys orbicularis* protection in Latvia was developed, discussed, and officially accepted by the Ministry of Environment of Latvia and officially published by Nature conservation agency in a free access



Full title of the project: DEVELOPMENT AND PRINTING OF TWO BROCHURES ON FIRE-BELLIED TOADS, POND TURTLES AND ITS CONSERVATION IN LATVIA [Divu brošūru par sarkanvēdera ugunskrupjiem, purva bruņurupučiem un to aizsardzību Latvijā izveidošana un drukāšana]

Registration number: 1-08/185/2007

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

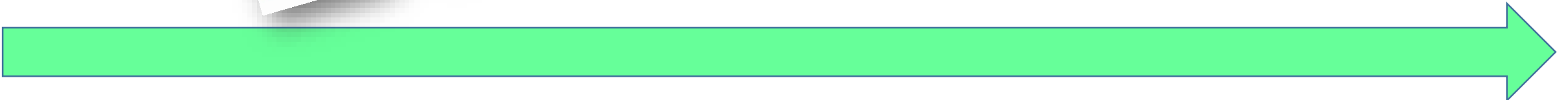
Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) adaptation of the Plan on *Emys orbicularis* protection for the population of Latvia; 2) development of simple and intelligible arrangements for population, especially landowners, on conservation of *Emys orbicularis* in Latvia; 3) writing and publishing of a brochure on the issue. As a result of realization of the project: 1) a brochure about condition and the Plan on *Emys orbicularis* protection in Latvia was developed (Pupins & Pupina 2007a); 2) the brochure was distributed among population of Latvia and libraries, as well as published in free access in the Internet.



Eo Bb Projekti Latvijā 2007. – 2021.



Full title of the project: DEVELOPMENT OF PLAN OF CONSERVATION OF POND TURTLES *EMYS ORBICULARIS* (L.) [Purva bruņurupuču *Emys orbicularis* (L.) Sugas aizsardzības plāna izstrādāšana]

Registration number: 1-08/663/2006

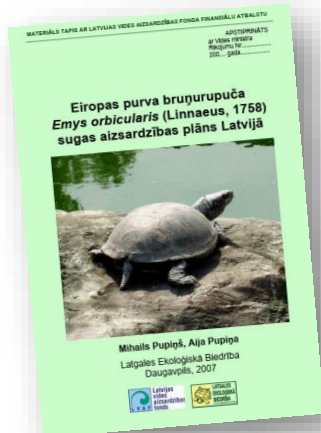
Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) analysis and generalization of data about *Emys orbicularis* in Latvia (Pupins & Pupina 2008b); 2) development and discussion of the Plan on *Emys orbicularis* protection in Latvia. As a result of realization of the project: 1) the threats for *Emys orbicularis* in Latvia were analysed and ranged (Meeske & Pupins 2009); 2) concrete measures for conservation of *Emys orbicularis* in Latvia were proposed; 3) the Plan on *Emys orbicularis* protection in Latvia was developed, discussed, and officially accepted by the Ministry of Environment of Latvia and officially published by Nature conservation agency in a free access



Full title of the project: DEVELOPMENT AND PRINTING OF TWO BROCHURES ON FIRE-BELLIED TOADS, POND TURTLES AND ITS CONSERVATION IN LATVIA [Divu brošūru par sarkanvēdera ugunskrupjiem, purva bruņurupučiem un to aizsardzību Latvijā izveidošana un drukāšana]

Registration number: 1-08/185/2007

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) adaptation of the Plan on *Emys orbicularis* protection for the population of Latvia; 2) development of simple and intelligible arrangements for population, especially landowners, on conservation of *Emys orbicularis* in Latvia; 3) writing and publishing of a brochure on the issue. As a result of realization of the project: 1) a brochure about condition and the Plan on *Emys orbicularis* protection in Latvia was developed (Pupins & Pupina 2007a); 2) the brochure was distributed among population of Latvia and libraries, as well as published in free access in the Internet.



Eo Bb Projekti Latvijā 2007. – 2021.

Full title of the project: DEVELOPMENT OF BUSINESS (SMALL TRADING) AS AN ELEMENT OF FORMING OF CITY ENVIRONMENT [Uzņēmējdarbības (mazumtirzniecības) attīstība kā pilsētvidi veidojošs elements]

Registration number: 1-08/663/2006

Status of the project: governmental structures of Latvia and local authorities supported project

Territory of the project: Daugavpils

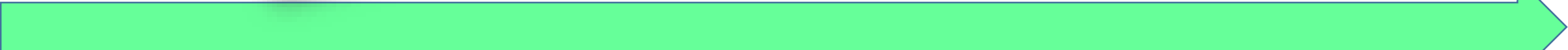
Project duration: 2008

Source for funding: European commission program INTERREG III B, Daugavpils city council

Project responsible: Daugavpils city council

Involved target specialists: Krivina Daina (head of development department of the Daugavpils city); Ivo Folkmanis (sculptor)

Consultants: Mihails Pupins, Aija Pupina
Project activities and main results: The real goal of the project was development of business (small trading) as an element of forming of city environment. An Emys-connected activity of the project was creation of a sculpture of *Emys orbicularis* in Daugavpils city, Latvia. Emys-connected out-comes of the project: 1) sculpture of *Emys orbicularis* was created and placed in center of Daugavpils city, Latvia; 2) *Emys orbicularis* became popular and more known for people, tourists and regional politicians in Latvia; 3) attitude of residents and regional tourists towards *Emys orbicularis* became more positive emotional.



8.Eo Bb

Full title of the project: DEVELOPMENT OF PLAN OF CONSERVATION OF POND TURTLES *EMYS ORBICULARIS* (L.) [Purva bruņurupuču *Emys orbicularis* (L.) Sugas aizsardzības plāna izstrādāšana]

Registration number: 1-08/663/2006

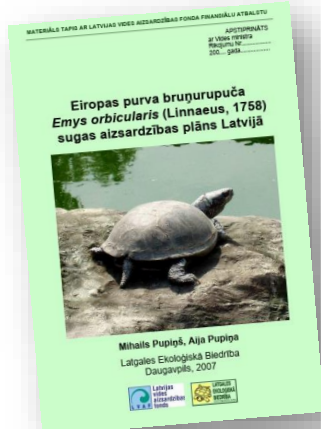
Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) analysis and generalization of data about *Emys orbicularis* in Latvia (Pupins & Pupina 2008b); 2) development and discussion of the Plan on *Emys orbicularis* protection in Latvia. As a result of realization of the project: 1) the threats for *Emys orbicularis* in Latvia were analysed and ranged (Meeske & Pupins 2009); 2) concrete measures for conservation of *Emys orbicularis* in Latvia were proposed; 3) the Plan on *Emys orbicularis* protection in Latvia was developed, discussed, and officially accepted by the Ministry of Environment of Latvia and officially published by Nature conservation agency in a free access



9.Bb Eo

Full title of the project: DEVELOPMENT AND PRINTING OF TWO BROCHURES ON FIRE-BELLIED TOADS, POND TURTLES AND ITS CONSERVATION IN LATVIA [Divu brošūru par sarkanvēdera ugunskrupjiem, purva bruņurupučiem un to aizsardzību Latvijā izveidošana un drukāšana]

Registration number: 1-08/185/2007

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) adaptation of the Plan on *Emys orbicularis* protection for the population of Latvia; 2) development of simple and intelligible arrangements for population, especially landowners, on conservation of *Emys orbicularis* in Latvia; 3) writing and publishing of a brochure on the issue. As a result of realization of the project: 1) a brochure about condition and the Plan on *Emys orbicularis* protection in Latvia was developed (Pupins & Pupina 2007a); 2) the brochure was distributed among population of Latvia and libraries, as well as published in free access in the Internet.



Eo Bb Projekti Latvijā 2007. – 2021.

10.Eo

Full title of the project: DEVELOPMENT OF BUSINESS (SMALL TRADING) AS AN ELEMENT OF FORMING OF CITY ENVIRONMENT [Uzņēmējdarbības (mazumtirzniecības) attīstība kā pilsētvidi veidojošs elements]

Registration number: 1-08/663/2006

Status of the project: governmental structures of Latvia and local authorities supported project

Territory of the project: Daugavpils

Project duration: 2008

Source for funding: European commission program INTERREG III B, Daugavpils city council

Project responsible: Daugavpils city council

Involved target specialists: Krivina Daina (head of development department of the Daugavpils city); Ivo Folkmanis (sculptor)

Consultants: Mihails Pupins, Aija Pupina
Project activities and main results: The real goal of the project was development of business (small trading) as an element of forming of city environment. An *Emys*-connected activity of the project was creation of a sculpture of *Emys orbicularis* in Daugavpils city, Latvia. *Emys*-connected out-comes of the project: 1) sculpture of *Emys orbicularis* was created and placed in center of Daugavpils city, Latvia; 2) *Emys orbicularis* became popular and more known for people, tourists and regional politicians in Latvia; 3) attitude of residents and regional tourists towards *Emys orbicularis* became more positive emotional.



11.Eo Bb

Full title of the project: LIFE+ PROJECT "CONSERVATION OF RARE REPTILES AND AMPHIBIANS IN LATVIA" [Retu rāpuļu un abinieku aizsardzība Latvijā]

Acronym: LIFE-HerpetoLatvia

Registration number: LIFE09NAT/LV/000239

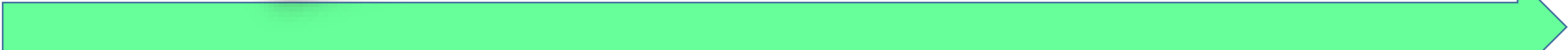
Status of the project: European commission supported project

Territory of the project: Silene Nature Park (Daugavpils novads, Latvia)

Project duration: 08.2010-08.2014

Source for funding: LIFE Programme of European Commission, Ministry of Environment, Daugavpils City Council, Nature conservation agency, Latgales Ecological Society

The project "Conservation of rare reptiles and amphibians in Latvia" (LIFE-HerpetoLatvia) was established with co-financing of European Commission and realized in 2010 – 2014. Project target goal on *Bombina orientalis* was to facilitate the enlargement of *Bombina orientalis* largest population Demene and to ensure *Bombina orientalis* long-time persistence in Latvia by combining in-situ, ex-situ methods, and legal protection improvement. As a result of the Project two new microreserves Natura 2000 territories (Katriniski and Strauti) were created for conservation of *Bombina orientalis*. For the *B. orientalis* 27 ponds were created or restored in Demene (14 in Katriniski and 13 in Strauti). More than 4 000 *Bombina orientalis* juveniles were raised in aquaculture and released for population Project LIFE-HerpetoLatvia LIFE09NAT/LV/000239 "Conservation of rare reptiles and amphibians in Latvia" was implemented in 2010 – 2014 in Latvia. One of three target species of the Projects is *Emys orbicularis*, and the target territory is Silene Nature Park, Territory Natura 2000. 17 ponds were restored in Silene Nature Park in four key sites (site areas – 6.3 ha; 15.4 ha; 15.4 ha; 0.5 ha) near Belarusian border. 42 *Emys orbicularis* were raised in aquaculture for 4 – 7 years and were released in restored ponds in 2014 in Silene Nature Park. After-LIFE activities of the Project LIFE-HerpetoLatvia provide *Agas* population monitoring and enforcement.





8.Eo Bb

Full title of the project: DEVELOPMENT OF PLAN OF CONSERVATION OF POND TURTLES *EMYS ORBICULARIS* (L.) [Purva bruņurupuču *Emys orbicularis* (L.) Sugas aizsardzības plāna izstrādāšana]

Registration number: 1-08/663/2006

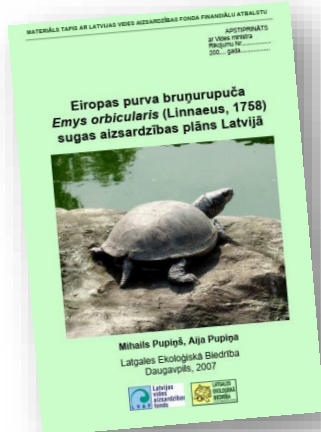
Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) analysis and generalization of data about *Emys orbicularis* in Latvia (Pupins & Pupina 2008b); 2) development and discussion of the Plan on *Emys orbicularis* protection in Latvia. As a result of realization of the project: 1) the threats for *Emys orbicularis* in Latvia were analysed and ranged (Meeske & Pupins 2009); 2) concrete measures for conservation of *Emys orbicularis* in Latvia were proposed; 3) the Plan on *Emys orbicularis* protection in Latvia was developed, discussed, and officially accepted by the Ministry of Environment of Latvia and officially published by Nature conservation agency in a free access



9.Bb Eo

Full title of the project: DEVELOPMENT AND PRINTING OF TWO BROCHURES ON FIRE-BELLIED TOADS, POND TURTLES AND ITS CONSERVATION IN LATVIA [Divu bruņurupuču par sarkanvēdera ugunskrupjiem, purva bruņurupučiem un to aizsardzību Latvijā izveidošana un drukāšana]

Registration number: 1-08/185/2007

Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) adaptation of the Plan on *Emys orbicularis* protection for the population of Latvia; 2) development of simple and intelligible arrangements for population, especially landowners, on conservation of *Emys orbicularis* in Latvia; 3) writing and publishing of a brochure on the issue. As a result of realization of the project: 1) a brochure about condition and the Plan on *Emys orbicularis* protection in Latvia was developed (*Pupins & Pupina 2007a*); 2) the brochure was distributed among population of Latvia and libraries, as well as published in free access in the Internet.



Eo Bb Projekti Latvijā 2007. – 2021.



10.Eo

Full title of the project: DEVELOPMENT OF BUSINESS (SMALL TRADING) AS AN ELEMENT OF FORMING OF CITY ENVIRONMENT [Uzņēmējdarbības (mazumtirzniecības) attīstība kā pilsētvidi veidojošs elements]

Registration number: 1-08/663/2006

Status of the project: governmental structures of Latvia and local authorities supported project

Territory of the project: Daugavpils

Project duration: 2008

Source for funding: European commission program INTERREG III B, Daugavpils city council

Project responsible: Daugavpils city council

Involved target specialists: Krivina Daina (head of development department of the Daugavpils city); Ivo Folkmanis (sculptor)

Consultants: Mihails Pupins, Aija Pupina
Project activities and main results: The real goal of the project was development of business (small trading) as an element of forming of city environment. An *Emys*-connected activity of the project was creation of a sculpture of *Emys orbicularis* in Daugavpils city, Latvia. *Emys*-connected out-comes of the project: 1) sculpture of *Emys orbicularis* was created and placed in center of Daugavpils city, Latvia; 2) *Emys orbicularis* became popular and more known for people, tourists and regional politicians in Latvia; 3) attitude of residents and regional tourists toward *Emys orbicularis* became more positive emotional.



11.Eo Bb

Full title of the project: LIFE+ PROJECT "CONSERVATION OF RARE REPTILES AND AMPHIBIANS IN LATVIA" [Retu rāpuļu un abinieku aizsardzība Latvijā]

Acronym: LIFE-HerpetoLatvia

Registration number: LIFE09NAT/LV/000239

Status of the project: European commission supported project

Territory of the project: Silene Nature Park (Daugavpils novads, Latvia)

Project duration: 08.2010-08.2014

Source for funding: LIFE Programme of European Commission, Ministry of Environment, Daugavpils City Council, Nature conservation agency, Latgales Ecological Society

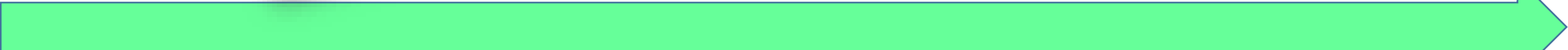
The project "Conservation of rare reptiles and amphibians in Latvia" (LIFE-HerpetoLatvia) was established with co-financing of European Commission and realized in 2010 – 2014. Project target goal on *Bombina orientalis* was to facilitate the enlargement of *Bombina orientalis* largest population Demene and to ensure *Bombina orientalis* long-time persistence in Latvia by combining in-situ, ex-situ methods, and legal protection improvement. As a result of the Project two new microreserves Natura 2000 territories (Katrīniski and Strauti) were created for conservation of *Bombina orientalis*. For the *B. orientalis* 27 ponds were created or restored in Demene (14 in Katrīniski and 13 in Strauti). More than 4 000 *Bombina orientalis* juveniles were raised in aquaculture and released for population Project LIFE-HerpetoLatvia LIFE09NAT/LV/000239 "Conservation of rare reptiles and amphibians in Latvia" was implemented in 2010 – 2014 in Latvia. One of three target species of the Projects is *Emys orbicularis*, and the target territory is Silene Nature Park, Territory Natura 2000. 17 ponds were restored in Silene Nature Park in four key sites (site areas – 6.3 ha; 15.4 ha; 15.4 ha; 0.5 ha) near Belaušian border. 42 *Emys orbicularis* were raised in aquaculture for 4 – 7 years and were released in restored ponds in 2014 in Silene Nature Park. After-LIFE activities of the Project LIFE-HerpetoLatvia provide *Emys* population monitoring and enforcement.



12.Eo

Projekta nosaukums: „SIMTGADU LATVIJAS SIMTGADU DZĪVNIKS – LAIKA PASTNIEKS NES VĒSTULI DIVSIMTGADU LATVIJAI (LV100-EO-LV200)”

Projekta laiks: 2017.- 2018.g.
Projekta Nr. 1-08/190/2017.





8.Eo Bb

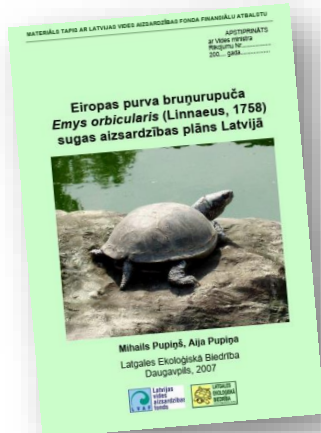
Full title of the project: DEVELOPMENT OF PLAN OF CONSERVATION OF POND TURTLES *EMYS ORBICULARIS* (L.) [Purva bruņurupuču *Emys orbicularis* (L.) Sugas aizsardzības plāna izstrādāšana]

Registration number: 1-08/663/2006
Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007
Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) analysis and generalization of data about *Emys orbicularis* in Latvia (Pupins & Pupina 2008b); 2) development and discussion of the Plan on *Emys orbicularis* protection in Latvia. As a result of realization of the project: 1) the threats for *Emys orbicularis* in Latvia were analysed and ranged (Meeske & Pupins 2009); 2) concrete measures for conservation of *Emys orbicularis* in Latvia were proposed; 3) the Plan on *Emys orbicularis* protection in Latvia was developed, discussed, and officially accepted by the Ministry of Environment of Latvia and officially published by Nature conservation agency in a free access



9.Bb Eo

Full title of the project: DEVELOPMENT AND PRINTING OF TWO BROCHURES ON FIRE-BELLIED TOADS, POND TURTLES AND ITS CONSERVATION IN LATVIA [Divu bruņurupuču par sarkanvādera ugunskrupjiem, purva bruņurupučiem un to aizsardzību Latvijā izveidošana un drukāšana]

Registration number: 1-08/185/2007
Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007
Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) adaptation of the Plan on *Emys orbicularis* protection for the population of Latvia; 2) development of simple and intelligible arrangements for population, especially landowners, on conservation of *Emys orbicularis* in Latvia; 3) writing and publishing of a brochure on the issue. As a result of realization of the project: 1) a brochure about condition and the Plan on *Emys orbicularis* protection in Latvia was developed (Pupins & Pupina 2007a); 2) the brochure was distributed among population of Latvia and libraries, as well as published in free access in the Internet.



10.Eo



Full title of the project: DEVELOPMENT OF BUSINESS (SMALL TRADING) AS AN ELEMENT OF FORMING OF CITY ENVIRONMENT [Uzņēmējdarbības (mazumtirzniecības) attīstība kā pilsētvidi veidojošs elements]

Registration number: 1-08/663/2006
Status of the project: governmental structures of Latvia and local authorities supported project

Territory of the project: Daugavpils

Project duration: 2008
Source for funding: European commission program INTERREG III B, Daugavpils city council

Project responsible: Daugavpils city council
Involved target specialists: Krivina Daina (head of development department of the Daugavpils city); Ivo Folkmanis (sculptor)

Consultants: Mihails Pupins, Aija Pupina
Project activities and main results: The real goal of the project was development of business (small trading) as an element of forming of city environment. An *Emys*-connected activity of the project was creation of a sculpture of *Emys orbicularis* in Daugavpils city, Latvia. *Emys*-connected out-comes of the project: 1) sculpture of *Emys orbicularis* was created and placed in center of Daugavpils city, Latvia; 2) *Emys orbicularis* became popular and more known for people, tourists and regional politicians in Latvia; 3) attitude of residents and regional tourists towards *Emys orbicularis* became more positive emotional.



11.Eo Bb

Full title of the project: LIFE+ PROJECT "CONSERVATION OF RARE REPTILES AND AMPHIBIANS IN LATVIA" [Retu rāpuļu un abinieku aizsardzība Latvijā]

Acronym: LIFE-HerpetaLatvia
Registration number: LIFE09NAT/LV/000239
Status of the project: European commission supported project

Territory of the project: Silene Nature Park (Daugavpils novads, Latvia)
Project duration: 08.2010-08.2014

Source for funding: LIFE Programme of European Commission, Ministry of Environment, Daugavpils City Council, Nature conservation agency, Latgales Ecological Society

The project "Conservation of rare reptiles and amphibians in Latvia" (LIFE-HerpetaLatvia) was established with co-financing of European Commission and realized in 2010 – 2014. Project target goal on *Bombina orientalis* was to facilitate the enlargement of *Bombina orientalis* largest population Demene and to ensure *Bombina orientalis* long-time persistence in Latvia by combining in-situ, ex-situ methods, and legal protection improvement. As a result of the Project two new microreserves Natura 2000 territories (Katrīniski and Strauti) were created for conservation of *Bombina orientalis*. For the *B. orientalis* 27 ponds were created or restored in Demene (14 in Katrīniski and 13 in Strauti). More than 4 000 *Bombina orientalis* juveniles were raised in aquaculture and released for population Project LIFE-HerpetaLatvia LIFE09NAT/LV/000239 "Conservation of rare reptiles and amphibians in Latvia" was implemented in 2010 – 2014 in Latvia. One of three target species of the Projects is *Emys orbicularis*, and the target territory is Silene Nature Park, Territory Natura 2000. 17 ponds were restored in Silene Nature Park in four key sites (site areas – 6.3 ha; 15.4 ha, 15.4 ha, 0.5 ha) near Belarussian border. 42 *Emys orbicularis* were raised in aquaculture for 4 – 7 years and were released in restored ponds in 2014 in Silene Nature Park. After-LIFE activities of the Project LIFE-HerpetaLatvia provide *Emys* population monitoring and enforcement.



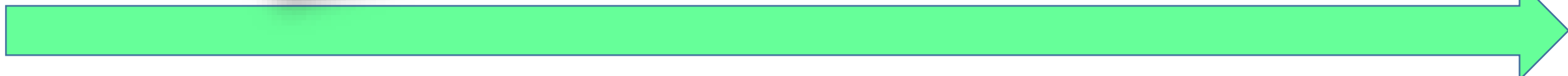
12.Eo

Projekta nosaukums: „SĪMTGADU LATVIJAS SĪMTGADU DZĪVNIKS – LAIKA PASTNIEKS NES VĒSTULI DIVSĪMTGADU LATVIJAI (LV100-EO-LV200)”.
Projekta laiks: 2017.- 2018.g.
Projekta Nr. 1-08/190/2017.



13.Eo Bb

Projekta nosaukums: “APDRAUDĒTO ABINIEKU UN RĀPULU SUGU BIOTOPU APSAIMNIEKOŠANAS PASĀKUMU ĪSTENOŠANA DABAS LIEGUMOS „KARATERI” UN „ILGAS””.
Finansētājs: Latvijas Vides Aizsardzības Fonda administrācija.
Projekta laiks: 05.2018.-10.2019.g
Projekta reģistrācijas Nr. 1-08/263/2018. Mērķis: Sauszemes un saldūdens biotopu augstas prioritātes apsaimniekošanas pasākumu īstenošana smilšu krupim, ugunskrupim un purva bruņurupučiem saskaņā ar dabas liegumu „Karateri” un „Ilgas” dabas aizsardzības plāniem.





8.Eo Bb

Full title of the project: DEVELOPMENT OF PLAN OF CONSERVATION OF POND TURTLES *EMYS ORBICULARIS* (L.) [Purva bruņurupuču *Emys orbicularis* (L.) Sugas aizsardzības plāna izstrādāšana]

Registration number: 1-08/663/2006

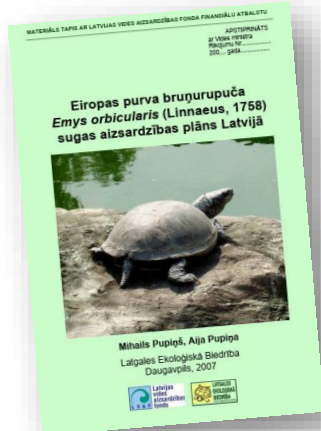
Status of the project: governmental structures of Latvia supported project

Territory of the project: whole territory of Latvia

Project duration: 2007

Source for funding: Latvian Environmental Protection Fund Administration

Project activities and main results: The main activities of the project were the following: 1) analysis and generalization of data about *Emys orbicularis* in Latvia (Pupins & Pupina 2008b); 2) development and discussion of the Plan on *Emys orbicularis* protection in Latvia. As a result of realization of the project: 1) the threats for *Emys orbicularis* in Latvia were analysed and ranged (Meeske & Pupins 2009); 2) concrete measures for conservation of *Emys orbicularis* in Latvia were proposed; 3) the Plan on *Emys orbicularis* protection in Latvia was developed, discussed, and officially accepted by the Ministry of Environment of Latvia and officially published by Nature conservation agency in a free access



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Full title of the project: DEVELOPMENT AND PRINTING OF TWO BROCHURES ON FIRE-BELLIED TOADS, POND TURTLES AND ITS CONSERVATION IN LATVIA [Divu bruņurupuču par sarkanvēdera ugunskrupjiem, purva bruņurupučiem un to aizsardzību Latvijā izveidošana un drukāšana]

Registration number: 1-08/185/2007

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Territory of the project: whole territory of Latvia

Project duration: 2007

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Project activities and main results: The main activities of the project were the following: 1) adaptation of the Plan on *Emys orbicularis* protection for the population of Latvia; 2) development of simple and intelligible arrangements for population, especially landowners, on conservation of *Emys orbicularis* in Latvia; 3) writing and publishing of a brochure on the issue. As a result of realization of the project: 1) a brochure about condition and the Plan on *Emys orbicularis* protection in Latvia was developed (Pupins & Pupina 2007a); 2) the brochure was distributed among population of Latvia and libraries, as well as published in free access in the Internet.



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Registration number: 1-08/663/2006

Status of the project: governmental structures of Latvia and local authorities supported project

Territory of the project: Daugavpils

Project duration: 2008

Source for funding: European commission program INTERREG III B, Daugavpils city council

Project responsible: Daugavpils city council

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Acronym: LIFE-HerpetaLatvia

Registration number: LIFE09NAT/LV/000239

Status of the project: European commission supported project

Territory of the project: Silene Nature Park (Daugavpils novads, Latvia)

Project duration: 08.2010-08.2014

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12.Eo

Projekta nosaukums: „SĪMTGADU LATVIJAS SĪMTGADU DZĪVNIĒKS – LAIKA PASTNIEKS NES VĒSTULI DIVSĪMTGADU LATVIJAI (LV100-EO-LV200)”.
Projekta laiks: 2017.- 2018.g.
Projekta Nr. 1-08/190/2017.



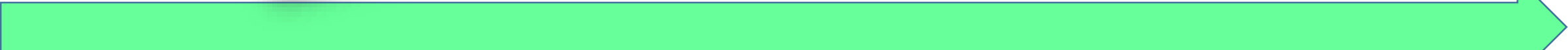
13.Eo Bb

Projekta nosaukums: “APDRAUDĒTO ABINIEKU UN RĀPUĻU SUGU BIOTOPU APSAIMNIEKOŠANAS PASĀKUMU ĪSTENOŠANA DABAS LIEGUMOS „KARATERI” UN „ILGAS””.
Finansētājs: Latvijas Vides Aizsardzības Fonda administrācija.
Projekta laiks: 05.2018.-10.2019.g
Projekta reģistrācijas Nr. 1-08/263/2018. Mērķis: Sauszemes un saldūdens biotopu augstas prioritātes apsaimniekošanas pasākumu īstenošana smilšu krūpim, ugunskrūpim un purva bruņurupučiem saskaņā ar dabas liegumu „Karateri” un „Ilgas” dabas aizsardzības plāniem.



14.Bb

Projekta nosaukums: „SARKANVĒDERA UGUNSKRUPJA DEGRADĒTO BIOTOPU ATJAUNOŠANA DABAS LIEGUMĀ “ISLICE””.
Projekta laiks: 09.2020.-30.11.2021.g.
Projekta reģistrācijas Nr. 1-08/263/2018.
Finansētājs: Latvijas Vides Aizsardzības Fonda administrācija.
Izpildītājs: “Islices sieviešu klubs “Rītausma”” biedrība, Līguma Nr. 01/10-2020.
Mērķis: realizējot spēka esošo Dabas aizsardzības plānu, 7 dažādu lielumu ugunskrūpju dīķi tiks atjaunoti un to krasti atfīrti no aizaugumiem, ap tos piesārņojuma kūtsmešļu glabāšanas vietas tiks izveidots aizsargvalnis.





Full title of the project: A SOCIO-ECOLOGICAL EVALUATION OF WETLANDS RESTORATION AND REINTRODUCTION PROGRAMS IN FAVOR OF THE EMBLEMATIC EUROPEAN POND TURTLE AND ASSOCIATED BIODIVERSITY: A PAN-EUROPEAN APPROACH (EMYS-R).

Proposal Nr. BiodivRestore-324.

Source for funding: BiodivRestore.

Partners: France (Coordinator), Germany, Poland.

Project duration: 2022.-2025.

Goal of the project: EMYS-R aims at 1) investigate the ecological processes improving wetland restoration and Emys reintroduction based on a) a focus on habitat recovery after restoration using biocenotic indices; b) a focus on Emys by monitoring reintroduced populations and their impact on other species using state-of-the-art biologging and eDNA. 2) assess tradeoffs and synergies between targets, benefits and policies, with a) an ecological focus on nontarget species (threatened amphibians and invasive crayfish); b) a socio-economic focus on value benefits of restoration, people's perception of restored nature, citizen science and deliberative processes involved in multi-stakeholder decision settings related to nature conservation. 3) ultimately produce guidelines for optimal wetland restoration protocols in favor of Emys reintroduction and people engagement in nature conservation based on a) our integrative approach, b) a review of past and current results, and c) a new model forecasting near future distribution and abundance of Emys at the European scale.



LV coordinator

- WP1. Task1.1. Wetland past ecological trajectories (DU)
- WP3. Task3.1. Non-target species assessment (DU)
- WP5. Task5.2. Forecasting long term success of EU funded projects (DU).

Public outreach LV

- LV stakeholders, DU students, visitors of Latgales Zoo, LV mass media

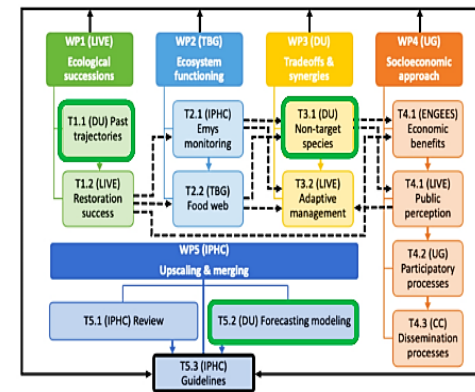


Figure 2. Fyke traps in the study: (a) prepared and used for catching; (b) deployed in a pond.

16.Eo

Full title of the project: LATGALES ZOO/MITRĀJA BIODAUDZVEIDĪBAS IT-GIDA MOBILĀS APLIKĀCIJAS UN QR-STENDU IZSTRĀDE

Projekta Nr. 1-08/74/2023.

Finansē: Valsts reģionālās attīstības aģentūra,
Latvijas vides aizsardzības fonda administrācijā

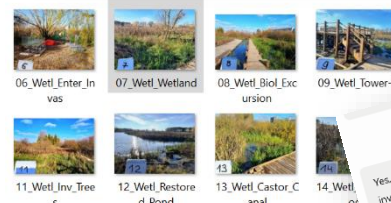
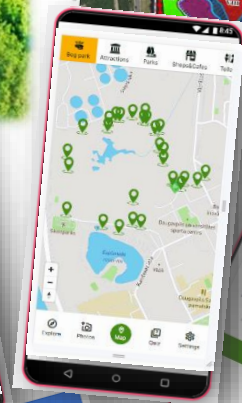
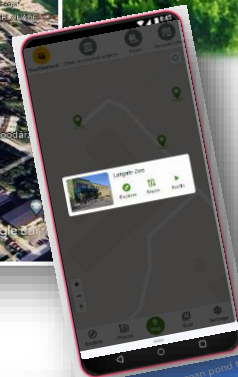
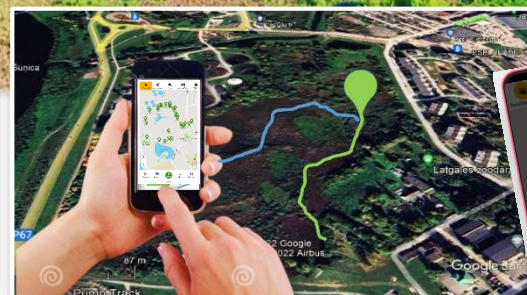
Partneris: Dabas aizsardzības pārvalde.

Projekta laiks: 2022.-2023.

Projekta būtība: Robežojoties ar Latgales zoodārzu (LZ, Daugavpili) un atbilstoši Sugu un biotopu ekspertu izstrādātajam apsaimniekošanas Plānam tiek veidots parks “*Latgales mitrāja biodaudzveidība*” (LMP), kam galvenā ieeja ir no LZ teritorijas un kas veido ar LZ vienotu vides apziņas veicināšanas, dabas aizsardzības un ekoloģiskās izglītošanas kompleksu “*Latgales Zoo/Mitrāja Biodaudzveidība*” (LZ/MB). Šeit notiks zoodārza un parka apmeklētāju, skolēnu, dabas draugu, pilsētnieku un tūristu, un citu mērķa grupu ekskursijas, tematiskās nodarbības skolēniem un pilsoņzinātnes aktivitātes u.c. pasākumi.

Lai efektīvi un ar modernām tehnoloģijām izmantot LZ/MB kompleksa iespējas sabiedrības mērķgrupu (skolēni, tūristi, dabas draugi, pilsētnieki, cilvēki ar ierobežotām iespējām, attālināti u.c.) vides apziņas veicināšanai un ekoloģiskai izglītošanai, samazināt dabas aizsardzības riskus parka mitrāja biodaudzveidībai no apmeklētāju iespējamās nelabvēlīgas ietekmes (traucēšana putniem ligzdošanās laikā; plānotiem izlaišanai LMP dabā purva bruņurupučiem; abiniekiem vairošanas laikā; citām sensitīvām sugām; invazīvo sugu izlaišanas riski u.c.),

Projektā tiek piedāvāts izstrādāt LZ/MB IT-interaktīvo vides apziņas un ekoloģiskās izglītošanas **4D vidi Latgales Mitrāja Biodaudzveidība**, kas iekļauj **IT-MI gida ģeolokācijas interaktīvo mobilo aplikāciju un 4 QR-stendu kompleksu** ar interaktīvo vides apziņu veicinošo, ekoloģiski izglītojošo, pilsoņzinātnes un dabas aizsardzības saturu, saistītus caur ģeolokāciju ar reālo Latgales mitrāja biodaudzveidību un integrētus ar Latvijas un pasaules ekoloģiskiem servisiem (WikipediaLV, WikipediaEng, OZOLS, Youtube, Dabas aizsardzības pārvaldes mājaslapas dokumenti u.c.)



Do you know about European pond turtles in Latvia?

Yes, I am familiar with European pond turtles in Latvia. Latvian Zoo has been involved in the preservation and research of the European pond turtle, scientifically known as *Emys orbicularis*. They have developed a Plan of Preservation for this species in Latvia, which includes studying their distribution and ecology. The zoo has also implemented practical measures to improve their habitats and has been engaged in ex-situ breeding and reintroduction programs for this species. If you have any specific questions about European pond turtles in Latvia or Latvian Zoo's involvement, feel free to add!



Eo Bb Projektu rezultātu apkopojums LV

Eo Bb Zinātnē

- Zinātniskie raksti (Scopus WoS >50%) Eo Bb **16**, IAS **12**
- Referāti **216** konferences **48** valstīs **21**

Eo Bb Plānošanā

- Eo Bb Sugu aizsardzības plāni **2**
- Eo Bb Populāciju un biotopu optimizācijas plāni **8**
- Eo Bb IAS bioklimatiskā u.c. modelēšana 20-50-100g **12** modeļi

Eo Bb Dabā

- Jaunas 4.pakāpes ticamības atradnes: Eo **19**; Bb vokalizēja **309**
- Populāciju atjaunošana: 3p Eo **62**; Bb ~**6000**
- Dīķu optimizācija: EoBb 27+Bb27= **54**
- Sauszemes biotopu optimizācija ~**34** ha

Eo Bb Izglītošanā

- Eo ekspozīcija Latgales zoodārzā (~**50 000** cilv/g x ~**20g**)
- Eo Bb chapters in international books (Germany, UK) **3** chapters
- Eo Bb grāmatas **6** un mācību līdzeklis biologiem / videniekiem **1**
- Eo Bb sugu noteicēji **5**
- Eo Bb DU mācību kursi **2**; ~**80** stud.
- Eo IT AI Gids Aplikācija **1**; QR-Stendi **4**
- Eo Bb Stendi **6**
- TV, radio, avīzes ~**26**
- Eo skulptūras Daugavpilī **2**

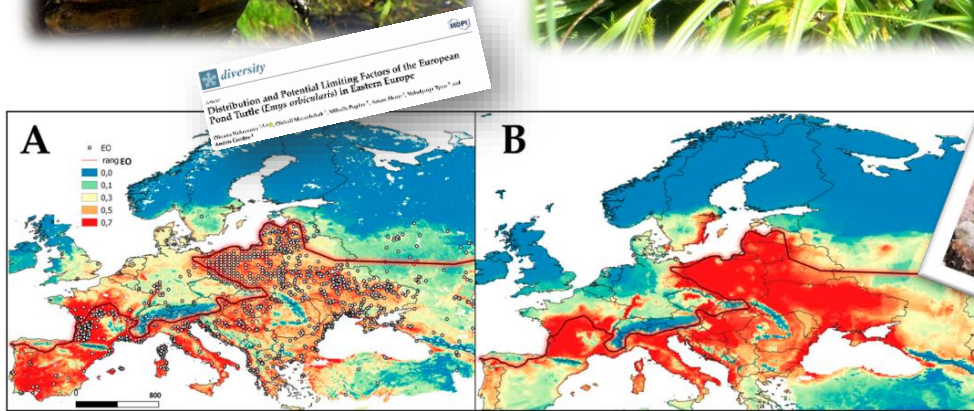
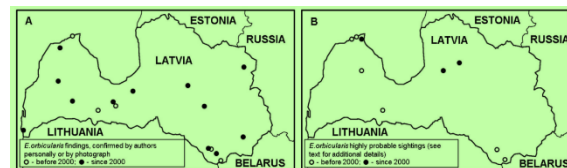


Figure 2. Potential (probabilistic) model of *E. orbicularis* expansion built in the Maxent program based on dataset: (A) GAEZ, current; (B) CliMond, 2090 dataset), GBIF data (2021). Areas with the highest habitat suitability (>0.5) are colored in red, and areas with the lowest (<0.1) in blue. The red line displays the current northern distribution border of native populations according to Fritz and Lauffer (2007) [11,32].



Paldies par sadarbību!



The research was partly funded by the BiodivERsA and Water JPI project "A socio-ecological evaluation of wetlands restoration and reintroduction programs in favor of the emblematic European pond turtle and associated biodiversity: a pan-European approach" and by the project "Ecological and socioeconomic thresholds as a basis for defining adaptive management triggers in Latvian pond aquaculture" (Izp-2021/1-0247). We thank project No. 16-00-F02201-000002 for providing laboratories for the research.