

**NEW SCIS PROPOSAL REGARDING THE ICHTIOFAUNA
AFTER THE FIRST CONTINENTAL BIOGEOGRAPHIC SEMINAR
FOR ROMANIA, SIBIU (TRANSYLVANIA, ROMANIA) 9-12 JUNE 2008**

Doru BĂNĂDUC¹, András Attila NAGY² and Angela CURTEAN-BĂNĂDUC¹

KEYWORDS: Romania, Continental Region, Natura 2000, SCIs, *Alosa pontica* / *Alosa immaculata*, *Umbra krameri*, *Aspius aspius*, *Barbus meridionalis*, *Gobio albipinnatus*, *Gobio kessleri*, *Gobio uranoscopus*, *Pelecus cultratus*, *Rhodeus sericeus amarus*, *Cobitis elongata*, *Cobitis taenia*, *Misgurnus fossilis*, *Gymnocephalus schraetzer*, *Zingel streber* and *Zingel zingel*..

ABSTRACT

The main objectives of the European Community in the environmental policy are the protection, conservation and improvement of environment quality, in the context of the rational use of the resources and also of the services of the ecosystems. In the last few decades the biodiversity protection was one of the main goal in this respect.

The aim of this paper is to give some data and related arguments for new Natura 2000 sites proposal, for 15 fish species. At the Continental Biogeographic Seminar for the Romanian national territory (held at the "Lucian Blaga" University of Sibiu, Sibiu, 9-12 June 2008), it was concluded that the area of distribution areas of some fish species are not enough covered with the already proposed and accepted Natura 2000 sites, so additional proposals were requested by the European Union representatives.

Consequently, this article proposes some new Natura 2000 sites, to be considered at the second Continental Biogeographic Seminar for Romania (scheduled for the end of 2012).

The suggested European Community interest sites in this article are based on the author's field data using specific criteria (well preserved fish populations; stable fish populations; healthy fish populations; typical natural habitats; relatively low human impact; favorable geographical position). The following fish species of conservative interest were included: *Alosa pontica* / *Alosa immaculata*, *Umbra krameri*, *Aspius aspius*, *Barbus meridionalis*, *Gobio albipinnatus*, *Gobio kessleri*, *Gobio uranoscopus*, *Pelecus cultratus*, *Rhodeus sericeus amarus*, *Cobitis elongata*, *Cobitis taenia*, *Misgurnus fossilis*, *Gymnocephalus schraetzer*, *Zingel streber* and *Zingel zingel*.

REZUMAT: Noi propuneri de SCI-uri, referitoare la ihtiofaună după Seminarul Biogeografic Continental pentru România, Sibiu (Transilvania, România) 9-12 iunie 2008.

Principalele obiective ale Comunității Europene în domeniul mediului sunt protecția, conservarea și îmbunătățirea calității mediului, în contextul utilizării raționale a resurselor și de asemenea a serviciilor ecosistemelor. În ultimele decenii, protecția biodiversității a fost unul dintre principalele obiective în această privință.

Scopul principal al acestei lucrări este acela de a oferi date și argumente în favoarea propunerii unor noi situri Natura 2000 pentru 15 specii de pești. La Seminarul Biogeografic pentru regiunea Continentală,

pentru teritoriul național al României (care s-a desfășurat la Universitatea „Lucian Blaga” din Sibiu, în 9-12 iunie 2008) s-a decis faptul că arealele unor specii de pești sunt insuficient acoperite de situri Natura 2000 propuse și acceptate, astfel propuneri suplimentare au fost solicitate de reprezentanți ai Uniunii Europene.

Ca o reacție la această situație, această lucrare propune unele situri Natura 2000 noi, pentru a fi luate în considerare la un potențial Seminar Biogeografic pentru regiunea Continentală a României.

Propunerile de situri de interes comunitar, prezentate în această lucrare, se bazează pe date de teren ale autorilor și criterii specifice (populații de pești bine menținute, stabile și sănătoase; habitate naturale tipice; impact antropic relativ scăzut; poziție geografică favorabilă). Au fost incluse următoarele specii de pești de

interes conservativ: *Alosa pontica* / *Alosa immaculata*, *Umbra krameri*, *Aspius aspius*, *Barbus meridionalis*, *Gobio albipinnatus*, *Gobio kessleri*, *Gobio uranoscopus*, *Pelecus cultratus*, *Rhodeus sericeus amarus*, *Cobitis elongata*, *Cobitis taenia*, *Misgurnus fossilis*, *Gymnocephalus schraetzer*, *Zingel streber* and *Zingel zingel*.

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INTRODUCTION

The primary aims of the European Community administration representatives in the environment field of interest are the protection, conservation and improving of the environment elements and structure quality, for a better use of the natural resources and services of the ecosystems, including the aquatic ecosystems.

During the last decades the biodiversity was one of the main issues in this respect.

To achieve this approach regarding the European Community environmental strategies and policies, the most up to date scientific and technical information were considered.

The action frame at the European Community level, to handle the biodiversity issue was established based on the Habitats Directive (92/43/EEC) and Birds Directive (79/409/EEC). These two very important European Directives have as the main objective to conserve the biodiversity in the European Union based on a protected areas network, namely the Natura 2000 net, to protect essential habitats and species characteristic for all the European biogeographic regions: Arctic, Boreal, Atlantic, Continental, Alpine, Pannonian Mediterranean, Macaronesian, Steppic, Black Sea and Anatolian (Fig. 1).

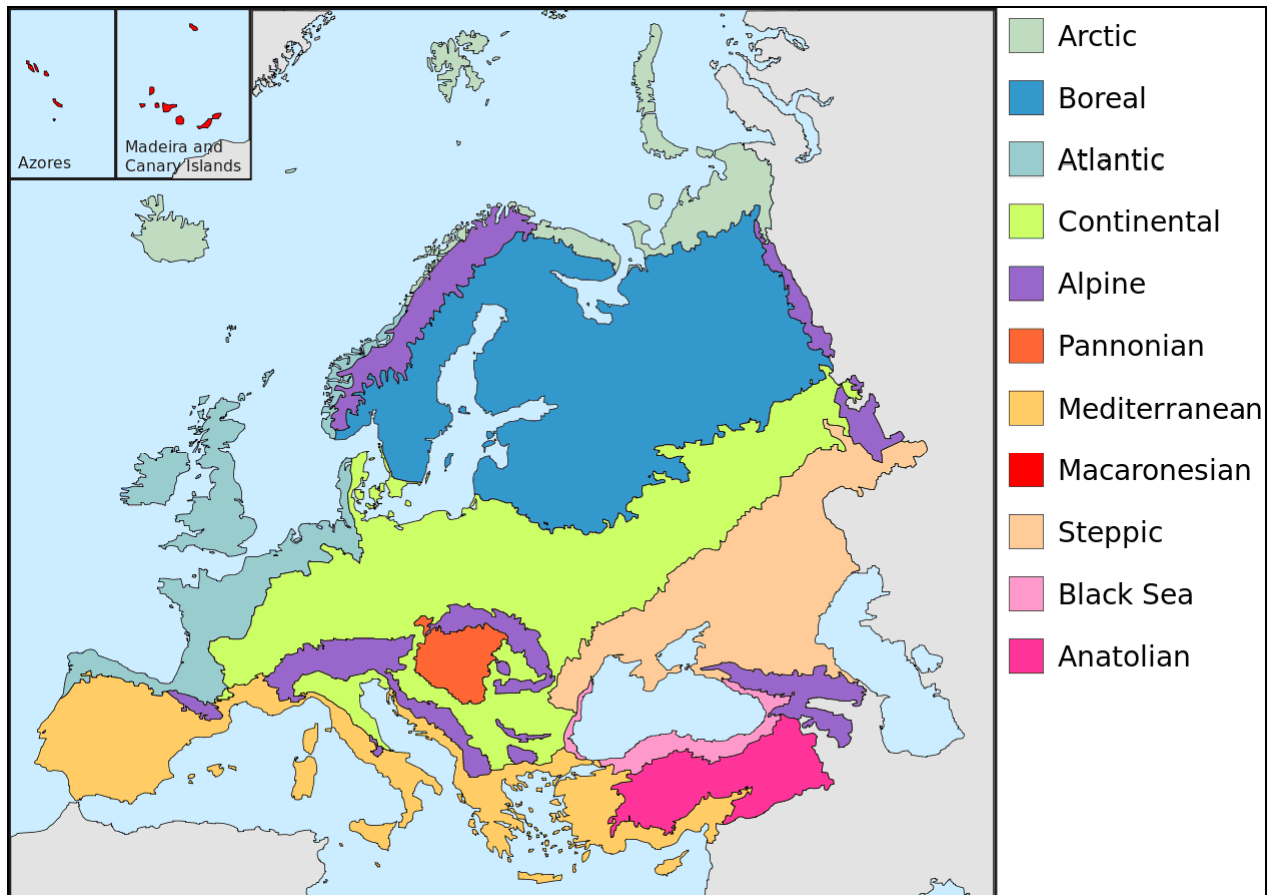


Figure 1: Europe biogeographic regions; European Environment Agency - www.eea.eu.in

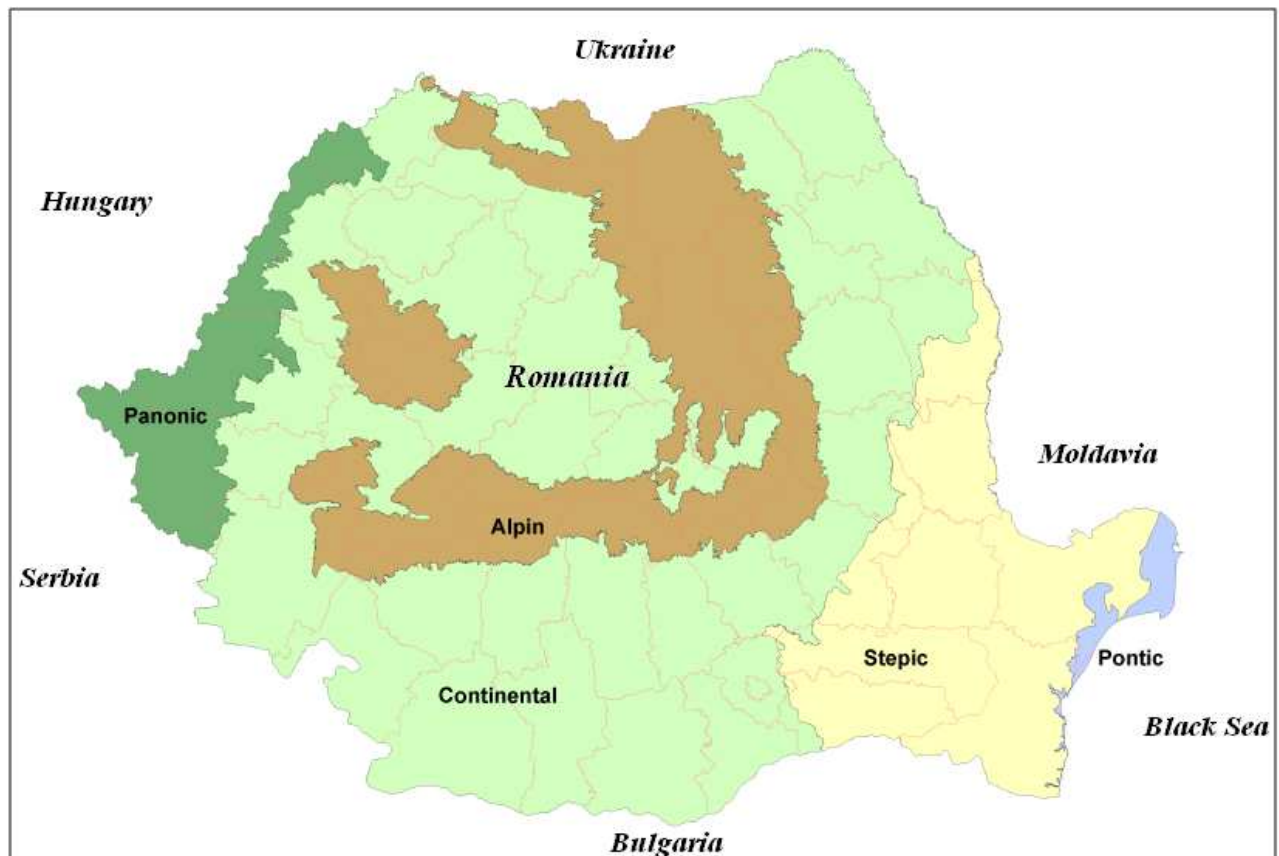


Figure 2: Biogeographic regions of Romania; after Ministry Order 776/2007, Annex 2.

Romania has the highest biogeographic diversity of all the European Union countries, comprising a total of five biogeographic regions: Continental, Alpine, Pannonian, Pontic and Stepic (Fig. 2). This country offers to the European natural heritage an amount of: 47% of the national territory covered by natural and semi natural ecosystems; 780 types of habitats; 3700 superior plant species; 33085 invertebrate species and 717 vertebrate species. (Bănăduc, 2001, 2006, 2007a, 2007b)

The Continental biogeographic region is very extensive, ranging from western to eastern Europe, starting in central France and continuing to the eastern edge of Poland and then descending all the way down to Romania and Bulgaria. A total of 13 European Union countries have all or part of their territory in the Continental Region. It covers major areas of France, Germany, Italy, Poland, Romania, Bulgaria and the Czech Republic as well as significant parts of Denmark, Belgium, Austria and Slovenia. Only Luxembourg is entirely within the Continental Region. Sweden, on the other hand, has just 3% of its country in this region.

(Sundseth and Creed, 2008)

In Romania, the Continental region is the best represented regarding its surface percentage of the national territory. (Fig. 2)

In this geographical area, there are few main directions through which the Natura 2000 net initiative on the Romanian territory can ameliorate its nature protection: expand of the natural areas surface; the realisation and implementation of optimum management plans for all these protected areas; governmental and nongovernmental institutional capacity building; general and specific raising awareness.

MATERIALS AND METHODS

In the European Natura 2000 initiative context the following site selection criteria were used for this specific study: well preserved fish (of Community interest - oCi) populations; stable fish (oCi) populations; healthy fish (oCi) populations; typical natural habitats (oCi); lowest (as

One principal element of the implementation of these Directives is the establishment of an optimum Natura 2000 network of sites on the Romanian national territory too.

Despite the fact that the Biogeographic Seminars for the Romanian territory were done (held at the “Lucian Blaga” University of Sibiu, in 9–12 June 2008), it was concluded after the end of this very important official technical meeting, the fact that the areals of some fish species of conservative interest were not sufficiently covered by Natura 2000 sites, so new sites proposals were asked by the European Union representatives.

As a result this scientific article deals with the proposal of some new such potential Natura 2000 sites, to be accepted at a potential second Continental Biogeographic Seminar for the Romanian territory or at bilateral (EU – Romanian Ministry of Environment) future negotiations.

The suggested sites of European Community interest of this scientific paper are based on data gathered from several field campaigns and based on specific criteria (well preserved fish populations; stable fish populations; healthy fish populations; typical natural habitats; relatively low human impact; favorable geographical position), regarding the following protected fish species: *Alosa pontica* / *Alosa immaculata*, *Umbra krameri*, *Aspius aspius*, *Barbus meridionalis*, *Gobio albipinnatus*, *Gobio kessleri*, *Gobio uranoscopus*, *Pelecus cultratus*, *Rhodeus sericeus amarus*, *Cobitis elongata*, *Cobitis taenia*, *Misgurnus fossilis*, *Gymnocephalus schraetzer*, *Zingel streber* and *Zingel zingel*.

possible) human impact presence; favorable geographical position (possibility of species spreading in more than one hydrographic watersheds); best option for species/habitat (oCi) in relation with the needed future Natura 2000 areas specific management.

This paper is based on data gathered during the last seven years and was focused on the following fish species of Natura 2000 initiative conservative interest: *Alosa pontica* / *Alosa immaculata*, *Umbra krameri*, *Aspius aspius*, *Barbus meridionalis*, *Gobio albipinnatus*, *Gobio kessleri*, *Gobio uranoscopus*, *Pelecus cultratus*, *Rhodeus sericeus amarus*, *Cobitis elongata*, *Cobitis taenia*, *Misgurnus fossilis*, *Gymnocephalus schraetzer*, *Zingel streber* and *Zingel zingel*; Annex II fish species.

It should be stated the fact that no complete data were available in order to

RESULTS AND DISCUSSIONS

Alosa pontica (Eichwald) 1838 / *Alosa immaculata* Bennet, 1835 - Natura 2000 code 2491/4125 (RO-Scrumbie de Dunăre, GB-Pontic shad, Black Sea shad; Kerch Black Sea shad, Kerch shad; DE-Donauhering, Schwarzmeer-Hering, FR-Alose de la Mer Noire, ES-Sábalo del Mar Negro; BG-Dunavska skumriya, Karagyoz; RU-Chernomorskaia sel'd, HU-dunai nagy hering, UA-Chernomorskaia seld.).

A general descriptive fact sheet is presented here due to the fact that some of the Natura 2000 areas administrations members are not in the position to identify all these species and the needed associated ecological and biological assessment, monitoring and management activities are not possible in this context. This species can be relatively easy confused with other species of the genus *Alosa*.

General descriptive fact sheet. The body of this fish species is elongated and lateral compressed. The dorsal profile smoothly and almost regularly advance from the snout to the pectoral fin, after which goes almost orizontaly. Gill rakers rather thin, usually equal to or a little shorter than the gill filaments. The mouth is big and terminal, a little oblique upward. The jaw is very big, broadened and rounded at its posteriour edge. The mandible tooth are egregious. The teeth are well developed in both jaws. The well developed eyelids, often cover the biggest part of the eye. The interorbitalyspace is plane or a little stuck out. Lofty and lateraly obtuse compressed

definitely and comprehensively establish and border different local stable fish populations. Further multiannual fish populational field studies are still needed for the needed specific quantitative aspects fulfilment.

The fish individuals were caught with specific fishing nets (active or/and passive fishing nets) or through electrofishing, followed by in situ identification to species level and released unharmed immediately afterward in their natural habitats for obvious conservative reasons.

snout. Rounded back. Lateraly compressed abdomen. The dorsal fin is situated aproximatively at the middle of the body, its insertion is situated closer to the snout than the caudal fin base or at equal distace. The dorsal fin is short and low, its edge is plain or slightly concave. The pectoral and ventral fins are short and edgy. The ventral fins are a little in the back of the dorsal fin. The anal fin is much at the back of the dorsal fin, long and low, its edge is almost plain. The caudal fin is deeply intrusive. Its back is intense green-bluish, its flanks silvery with an accentuated gloss. The head is sometimes hoary, or darkened. This species fins are colourless. (Bănărescu and Bănăduc, 2007)

Concerning the *Alosa pontica* / *Alosa immaculata* species, at the Continental Biogeographic Seminar helded in Sibiu, Transylvania, Romania, in 9–12 June 2008, there were raised some conclusions about its proposed sites status as insuficient minor. One new enlarged site in this respect and a new site are proposed below.

Proposed sites. One of the proposed new enlarged site is at the confluence between Olt and Danube rivers, minimum 10-15 km on the Danube upstream of the confluence with the Olt River and minimum 10-15 km downstream of the confluence with this river. The second proposed site is at the Jiu and Danube rivers confluence, minimum 10-15 km on the Danube upstream of the confluence with the Jiu River and minimum 10-15 km downstream of the confluence with this river.

Umbra krameri Walbaum, 1792 - Natura 2000 code 2011 (RO-țișănuș bătrân, țișănuș; GB-Mudminnow; DE-Hundfisch; HU-lápi póc).

A general descriptive fact sheet is presented below due to the fact that some of the Natura 2000 areas administrations members are not able to identify all this species and the needed associated ecological and biological assessment, monitoring and management activities are not possible in this context.

General descriptive fact sheet. The head of this fish species is laterally compressed. The body is moderate laterally compressed. The interorbital space is slightly convex. The mouth is small, terminal and a little oblique. Large gill's openings. The caudal peduncle is laterally compressed. The pectorals are rounded. The anal and caudal fins edges are rounded as well. The whole body is covered with big scales. No lateral line. The body is brown with dark shadows. The ventral side is yellowish. A series of dark spots of variable shapes, on the body flanks form two longitudinal parallel irregular lines. At the

Aspius aspius (Linnaeus, 1758) - Natura 2000 code 1130 (RO-avat, haut, aun, gonaci, pește-lup, buțoi, guran; DE-Raapf, Rapen, FR-Aspe; GB-Asp, RU-Zherekh, UK-Bilyzna, HU-balin, CS-Bolen).

A general descriptive fact sheet is presented below due to the fact that this species can be misidentified with other species (*Rutilus rutilus*, *Leuciscus idus*, *Leuciscus cephalus* or *Vimba vimba*) by the European Natura 2000 sites administrations members.

General descriptive fact sheet. The body of this fish species is elongated and slightly laterally compressed. The head dorsal profile smoothly get up till the head is over where it suddenly get raised up forming a kind of humpback. The head length represent 22 - 27 % of the body (excluding the caudal fin) length. The eyes are small and are placed laterally and ahead. The forehead is almost flat. The snout length represents 25 - 31 % of the head length. The

middle of the body is a light coloured line. The fins are yellowish-greyish or brown. At the base of the dorsal fin and the caudal fin is a dark transversal line. It can reach over 15 cm in total length. (Bănărescu and Bănăduc, 2007)

About the *Umbra krameri* species, at the Continental Biogeographic Seminar from Sibiu 9–12 June 2008, there were underlined the final conclusions about its proposed sites status as scientific reserve especially for the southern wetland areas of Romania. Few additional sites were required for this species on the Romanian national territory. In this respect new sites were proposed in this paper.

Proposed sites. The new or enlarged proposed sites are: the Comana Lake and its tributary Gurbanu Rivulet; the Neajlov River in the proximity of the Comana Lake; the wetland near the Comana Locality railway station (Giurgiu County); and Tânganu Rivulet in Cernica Forest (Ilfov County). (Bănăduc, 2008) Of course there may be other wetlands where this elusive species may still be present with good status of conservation populations.

mouth is big, terminal and upward oblique, it ends under the eye. Thin and continuous lips. The inferior jaw has a protuberance which is fitting in a cavity of the superior jaw, this morphological adaptation help the fish to grab the prey. The dorsal fin insertion is situated closer to the caudal fin base than to the top of the snout. The dorsal fin extremity is concave. The pectoral fins did not touch the base of the ventral fins; their length represent 17 - 20 % of the body length. The ventral fins represent 13 - 17 % of the body length. The anal fin extremity is strong concave. The caudal is deep holed. The scales are thin but well fixed. The back is dark-olive, silvery flanks, the ventral part white. The dorsal and the caudal fins are dun, the ventral and anal fins are colourless or pale reddish, the pectoral fins colourless. The lips are hoary. Usually this species can reach a length of 30 - 40 cm and a maximum of 80 cm. (Bănărescu and Bănăduc, 2007)

Regarding *Aspius aspius*, at the Continental Biogeographic Seminar for Romania, from Sibiu 9-12 June 2008, there were underlined conclusions about its proposed sites as insufficient moderate status. More sites were required for this species on the Romanian national territory. New sites in this respect are proposed below.

Proposed sites. The proposed sites comprise several areas as follows: Mureş River (from Deda to Reghin); Mureş River (from Reghin to Târgu Mureş); Mureş River (from Ungheni to Luduş); Mureş River (from Gheja to Mihălţ); Mureş River (three km upstream the confluence with the Târnavă River to two km downstream the confluence with the Ampoi River); Mureş River (from Băcăinţi to Şoimuş); Someş

Barbus meridionalis Riso, 1827 - Natura 2000 code 1138 (RO-moioagă, moiţă, cârcuşă, jumugă, jamlă, jamnă, mreană pătată, mreană vânătă, mreană de munte, mreană de vale; BG-Cherna, DE-Forellenbarbe, Semling, Afterbarbe; FR-Barbeau truite, Truitat, Turquan; GB-Mediterranean barbell; HU-petényi márna, CS-Potocna mrena).

A general descriptive fact sheet is presented below, due to the fact that this species can be misidentified with other species of the genus *Barbus* by some of the European Natura 2000 sites administrations members and the needed management activities are not possible in this circumstances.

General descriptive fact sheet. Elongated body. The superior profile of the body is an ascendant curveline from the snout to the dorsal fin, without to reach the dorsal fin. The last simple radia of the dorsal fin is thin, flexible and not jagged. The ventral fins are inserted backward to the dorsal fin insertion. The dorsal fin edge is flat or slightly fluted. The lips are more fleshy and developed in comparison with the species *Barbus barbus*. The posterior whiskers are sometimes long, exceeding the back of the eye. The back of the body is dark brown-rusty coloured, with darker and lighter spots, the flanks are yellow-rusty

River (from Benesat to Tămaia); Someş River (from Arduşat to the Hungarian border); Someş River between Someş-Odorhei and Sălsig; Râul Negru River from Lemnia to the confluence with the Olt River; Vedea River between Barza (Pădurea Berzei) and downstream to the confluence with Teleorman River (to Bujoru locality); Teleorman River between Măgura and the confluence with the Vedea River; Claniţa River between Merişani and the confluence with the Teleorman River; Şieu River from Sărata to the confluence with Someşul Mare River; Neajlov River from Vadu-Lat to Singureni; Siret River upstream from the Răcăciuni lake to the Ion Creangă locality.

More scientific researches can improve this proposal with new sites.

with spots, the ventral side is light yellow. The dorsal and caudal fins with accentuated spots, the rest of the fins are yellowish. The whiskers are yellowish with no red axis. It can reach a maximum length of 28-30 cm. (Bănărescu and Bănăduc, 2007)

Regarding the *Barbus meridionalis* species, at the Continental Biogeographic Seminar meeting from Sibiu 9-12 June 2008, there were revealed some conclusions about its proposed sites as insufficient moderate status, extension of the existing sites and adding of new sites being necessary on the Romanian territory. Some new sites in this respect are proposed below.

Proposed sites. Crişul Alb River (from Gurahonţ to Ineu), Mara River (from Mara locality to the confluence with Iza River), Şieu River from Sărata to the confluence with Someşul Mare River; Budac River from Jelna to the confluence with the Şieu River, Mureş River from Deda to Târgu Mureş, Târnavă Mare River from Sighişoara to Mediaş, Niraj River from Miercurea Nirajului to the confluence with the Mureş River, Timiş River (downstream of the confluence with Teregova River to Constantin Daicoviciu locality), Sebeş River/Caraş-Severin County, from the half of the distance between Turnu Ruieni and Borlova localities to the Carbonifera neighborhood of the town of Caransebeş,

Nera River (downstream Sasca Montană to the Romanian-Serbian frontier), Vâlsan River (its middle and lower sectors to the confluence with Argeş River), Râul Doamnei River from Slatina to Domneşti locality, Putna River between Garoafa and Vânători, Cerna River (Olt Basin) between Roeşti and Măciuca, Gilort River (Jiu Basin) at least between Baia de Fier and Frasin locality, Jiu River from Bumbăşti-Jiu to

Gobio albipinnatus (Lukasch, 1933)
- Natura 2000 code 1124 (RO-porcuşor de şes; DE-Weißflossiger Gründling; GB-White-finned gudgeon; HU-halványfoltú küllő; UK-Pinchkur svitloplavtsovyi; RU-Peskar svetloplavnikovyi).

A general descriptive fact sheet is also presented here for this species due to the fact that this species can be misidentified with other species of the genus *Gobio*, by the European Natura 2000 sites administrations members, and these misidentifications should be avoided.

Descriptive elements. The body and the caudal peduncle of this fish species are relatively high and laterally compressed. The peduncle height is a little higher in comparison with the thickness at the level of the anal fin posterior edge. 7 exceptional 8 divided rays in the dorsal fin. There are four scales between the lateral line and the ventral fins. In Romania can be found *Gobio albipinnatus vladykovi* Fang 1943. Convex dorsal profile. The maximum height of the body is situated at the dorsal fin insertion. The snout is short and obtuse. The eyes are big and close, looking more upward. The whiskers reach in general the posterior edge of the eye. The caudal peduncle is slightly laterally compressed. The caudal fin is profound holed, its superior lobe being longer than the inferior one. The pectoral fins do not reach the ventral fins insertion, the ventral fins outgrow the anus but do not reach the anal fin. The anus is more closer to the ventral fins than the anal fin. The superior part is light yellowish-greyish. The dorsal side of the head is darker greyish, with even darker spots and lines. On flanks in general 7 - 8

Turcineşti, Bistriţa River (Jiu Basin) from Peştişani to the confluence with the Jiu River, Motru River from Negoieşti to Cătunele and from Cernaia to the confluence with the Jiu River, Moldova River between Gura Humorului and Roman, Suceava River from Dorneşti to Suceava locality.

More scientific researches can improve these proposals with new sites.

round spots. The lateral line scales have two black spots not very well marked. The ventral face is white. On the dorsal and caudal fins rays are two rows of black spots, also not very well marked. It can reach 13 cm in length. (Bănărescu and Bănăduc, 2007)

Regarding the *Gobio albipinnatus* species, at the Continental Biogeographic Seminar meeting for Romania, from Sibiu (Transylvania, Romania) 9–12 June 2008, there were underlined some specific conclusions about the proposed and accepted sites as insufficient moderate status. More sites were required and also extension of existing sites were required on the Romanian national territory, especially in the Mureş River basin and on the Danube River. Some new sites are proposed in this respect below.

Proposed sites. Caraş River, from downstream of the locality Grădinari to the national border between Romania and Serbia; the confluence of the Olt River with the Danube River, from Scărişoara; Someş River (from Benesat to Tămaia); Someş River between Arduşat and the national border between Romania and Hungary; Mureş River from downstream of Ungheni locality to 5 km downstream of Luduş locality; Mureş River from 5 km upstream of the confluence with Târnava River to 3 km downstream of the confluence with the Ampoi River; Mureş River from Vinţu de Jos downstream to Dobra locality; Târnava River from downstream of Copşa Mică locality and the confluence with the Mureş River in the proximity of Mihalţ locality; Niraj River from Ceauaşu de Câmpie to the confluence with the Mureş River; Crişul Alb River from Almaş to 3 km downstream of

Buteni locality; Gilort River (Jiu River watershed) at least 3 km upstream of the Mirosloveni locality and 5 km downstream to Frasin locality; Milcov River between Broșteni and Cămpineanca localities; Șieu River from Sărata locality to the confluence with the confluence with the Someșul Mare

Gobio kessleri (Dybowsky, 1862) - Natura 2000 code 1124 (RO-porcușor de nisip; DE-Sandgressling, Kessler Gründling; GB-Kessler's gudgeon; RU-Dnestrovskii dlinnuosi peskar; HU-homoki küllő; UK-Pichkur dunaiskyi dovgosy).

A descriptive general fact sheet is presented here due to the fact that this species can be misidentified with other species of the genus *Gobio* by the European Natura 2000 sites administrations members and this species populations needed assessment, monitoring and management are impossible without their accurate identification.

Descriptive elements. The body has a low profile and is thick or relatively high and slightly laterally compressed. The caudal peduncle is thick and cylindrical, its thickness in general bigger than the minimum height. The eyes are variable in dimensions, usually smaller than the interorbital space. The lateral scales are much higher than longer. The whiskers have variable length. The caudal lobes are almost equal (excepting *G. k. banaticus*). (Bănărescu and Bănăduc, 2007)

Regarding the *Gobio kessleri* species, at the Continental Biogeographic Seminar meeting from Sibiu 9–12 June 2008, there were underlined some final conclusions about its proposed sites as

Gobio uranoscopus (Agassiz, 1828) - Natura 2000 code 1122 (RO-porcușor de vad, chetrar; DE-Steingressling, Steinkresse; GB-Danube Gudgeon; RU-Peskar-verkhoglyad; HU-felpillantó küllő; UK-Dunaiskii dlinnousyi peskar).

A general descriptive fact sheet is presented here in the context in which this fish species can be relatively easily misidentified with other species of the

River; Budac River from Jelna to the confluence with the Șieu River; Vedeia River from Cucueți locality to the proximity of Alexandria locality.

More scientific researches can improve this proposals with new sites.

insufficient moderate status. More sites were required and also extension of the existing sites were required on the Romanian national territory. Some new sites in this respect are proposed below.

Proposed sites. Mureș River from Deda to Târgu Mureș; Mureș River, 6 km downstream of Ungheni to Luduș; Mureș River 5 km from the confluence with Târnava River to 3 km downstream with the confluence with the Ampoi River; Șieu River from Sărata locality to the confluence with the Someșul Mare River; Budac River from Jelna to the confluence with the Șieu River; Târnava Mare River between Sighișoara and Mediaș localities; Târnava River between Blaj locality and the confluence with the Mureș River in the proximity of Mihalț locality; Someș River (from Benesat to Tămaia); Someș River (from Ardușat to the Hungarian border); Someș River between Someș-Odorhei and Sălsig; Motru River between Cernaia and Glogova localities; Putna River between Balotești and Vânători localities; Cerna River (Olt River Basin) from the Roești locality to the locality Măciuca; Crișul Alb River from Almaș locality to downstream of Buteni locality.

More scientific researches can improve this proposals with new sites.

genus *Gobio* by some of the European Natura 2000 sites administrations members and the needed biological assessment, monitoring and management activities are impossible without accurate identification.

Descriptive elements. The body and the caudal peduncle of this species are thick and cylindrical. At the lips joining points there is a posterior extension which

seem like a second pair of whiskers. The anal orifice is more close to the anal fin than the ventral fins. The chest is completely covered with scales. In Romania lives the subspecies *Gobio uranoscopus friči* Vladykov 1925. The dorsal profile of this subspecies is slightly convex, the ventral profile is horizontal. The snout is relatively sharp. The eyes look much upward. The ventral fins are inserted under the dorsal fin insertion or a little backward. The caudal fin is deeply holed, the lobes are rounded and equal or almost equal (the inferior lobe a little longer). The edge of the dorsal fin is slightly holed. The dorsal side is greyish-greenish or brown-redish. The back scales have black edges. Behind the dorsal fin are 2 - 3 big dark spots. On the flanks are 7 - 10 big rounded spots. The ventral side is white-yellowish. At the caudal fin base are two white spots. On the lateral line scales are two small black spots. On the dorsal and caudal fins are two rows of black spots. It can reach at 13 cm length. (Bănărescu and Bănăduc, 2007)

Regarding the *Gobio uranoscopus* species, at the Continental Biogeographic Seminar meeting from Sibiu 9–12 June 2008, there were underlined some final specific conclusions about its proposed and

Pelecus cultratus (Linnaeus, 1758) - Natura2000 code 2522 (RO-sabiță; GB-Sichel; DE-Sichling; HU-garda, UA-Tschékhon; BG-Sabitza; RU-Chekhon; CS-Sabljarka).

A general descriptive fact sheet is presented here in order to allow the identification of this species by some of the European Natura 2000 sites administrations members for the needed biological assessment, monitoring and management activities.

Descriptive elements. Elongated streamlined body, much compressed on laterals. The body dorsal profile is at the majority of the exemplars, an almost horizontal line, from the snout to the caudal fin insertion. The eyes are very large, situated on the anterior half of the head. The mouth is superior and almost vertical, small, did not reach the inferior edge of the

accepted sites as being insufficient minor and scientific reserve in the Someș River watershed. It was underlined the fact that more sites for this species were needed and also extension of the already proposed sites were required on the Romanian territory.

Proposed sites. Crișul Alb River from 3 km upstream of Gurahonț locality to Ineu locality; Șieu River (Someșul Mare River watershed) from the confluence with Someșul Mare River to the confluence with Budac River and upstream to the Jelna locality; Mureș River from the proximity of Târgu Mureș locality to the locality Deda; Doamnei River (Argeș River watershed) the main course between 470 m altitude (Domnești locality) and 700 m altitude (the confluence from upstream of the Nucșoara locality); Someșul Mare River from the proximity of Dej locality to upstream of Năsăud locality; Bistrița River (Jiu River watershed) from 5 km upstream of the Peștișani locality to the proximity of Telești locality; Gurghiu River (Mureș River basin) from the confluence with the Mureș River to the proximity of Ibănești locality; Moldova River from upstream the locality Drăgușeni to Tupilați.

More scientific researches can improve this proposals with new sites.

eye. The inferior jaw is prominent in comparison with the superior one. The dorsal fin is situated very posterior. The dorsal fin edge is slightly concave. The anal fin is very long, much higher in its anterior part than in its posterior part, with a concave edge. The caudal fin is strong, deep fluted, the inferior lobe is longer than the superior one. The scales are small, thin, cover all the body including the dorsal part of the till the eyes and the chest. The lateral line is very sinuous, especially at the anterior part of the body. The superior side is dark blue or grey-bluish with a strong metallic shine, the flanks are shining silvery, the ventral side is white. The pectoral, dorsal and caudal fins are grey, the other fins are yellowish. It can reach 50 cm and one kg. (Bănărescu and Bănăduc, 2007)

Regarding the *Pelecus cultratus* species, at the Continental Biogeographic Seminar meeting from Sibiu 9–12 June 2008, there were underlined the conclusions about its proposed sites as being insufficient moderate.

Rhodeus sericeus amarus (Bloch, 1782) - Natura 2000 code 1134 (RO-boarță, boarcă, blehniță; GB-Bitterling; DE-Bitterfish; FR-Bouvière; HU-szivárványos ökle; UA-Gorchak).

A general descriptive fact sheet is presented here to allow the identification of this species by some of the European Natura 2000 sites administrations members for its assessment, monitoring and management.

Descriptive elements. Acentuated and high lateral compressed body. Convex dorsal profile, drawing up from the tip of the snout to the dorsal fin insertion; behind the dorsal fin the profile descent accentuated. Laterally compressed head. The eyes are situated in the anterior half of the head. Small, subterminal, crescent shaped with thin lips mouth. The dorsal fin is inserted in general at equal distances from the tip of the snout and the caudal fin base. The edge of the dorsal fin is slightly convex. The pectoral fins are short, rounded at the top. The ventral fins insertion are situated under the dorsal fin insertion or very little before it; their tops reach or almost reach the anterior edge of the annal fin. The annal fin insertion is under the middle of the dorsal fin; its edge is slightly concave. The scales are big, more higher than longer, persistent. The chest is covered with smaller scales. The lateral line is short. The dorsal part of the body and of the head are greysh-yellowish, the flanks are white, the dorsal and caudal fins are grey, the other fins with a redish shade. Along the body's posterior half part and of the caudal peduncle is a greenish line. It can reach 7.9 cm in length. (Bănărescu and Bănăduc, 2007)

Regarding the *Rhodeus sericeus amarus* species, at the Continental Biogeographic Seminar meeting from Sibiu

Proposed sites. Mureș River from 5 km upstream of the confluence with Târnava River to 3 km downstream with the confluence with Ampoi River; Mureș River in the proximity of Ungheni locality.

More scientific researches can improve this proposals with new sites.

9–12 June 2008, there were underlined some final conclusions about its proposed sites as insufficient moderate status. More sites were required and also extension of existing sites were required on the Romanian national territory, especially in the Mureș River basin and on the Danube. In this respect new sites for this species are proposed.

Proposed sites. Few lakes from the middle of Transylvania (near Geaca and Cătina localities, near Zau de Câmpie and Șaulia localities) Mureș River 3 km upstream of Ungheni locality to 5 km downstream Luduș locality; Mureș River from Gheja to Mihalț; Mureș River from 5 km upstream its confluence with Târnava River to 3 km downstream its confluence with Ampoi River; Mureș River (from Băcăinți to Șoimuș); Niraj River from Ceaușu de Câmpie to the confluence with the Mureș River; Șieu River from Sărata locality to the confluence with the Someșul Mare River; Budac River from Jelna to the confluence with the Șieu River; Râul Negru River from Lemnia to the confluence with the Olt River; Moldova River between Oniceni and Tupilați localities; Teleorman River between Măgura locality and the confluence with Vedea River; Vedea River between Ghimpețeni Noi and the confluence with the Danube River; Mureș River from 5 km upstream of its confluence with Târnava River to 3 km downstream of its confluence with Ampoi River; Motru River between Cernaia and the confluence with the Jiu River; Neajlov River between Singureni and Podul Doamnei localities; Siret River between Pașcani and Roman localities; Suceava River between Suceava and Liteni; Suceava River between Dornești and Mihoveni; Târnava Mare River between Copșa Mică and the confluence with the

Mureş River; Târnava Mare River between Sighișoara and Mediaş; Târnava Mare River between Odorheiu Secuiesc and Vânători; Someşul Mic River and its wetlands from Petreşti to Gherla localities; Someş River between Glod and Someş-Odorhei localities;

Cobitis elongata Heckel and Kner, 1858 - Natura 2000 code 2533 (RO-fâsă mare; GB-Spotted Big Loach, Balkan Loach).

A general descriptive fact sheet is presented here to allow the identification, without confusion with other species belonging *Cobitis* and *Sabanejewia* genera species, by some of the European Natura 2000 sites administrations members for the necessary assessment, monitoring and management activities.

Descriptive elements. The body is much bigger in comparison with the other representatives of the genus reaching a maximum length of 165 mm. The body is elongated and thick. The body height is from the pectoral fins insertion to the anal fin insertion. The interorbital space is almost plain. The mouth is small and inferior. The inferior lip forms a pair of sharp whisker-like posterior elongations. The longest pair of whiskers is the third one. The caudal peduncle is long, low, laterally compressed, without a dorsal fatty crest, with a thin ventral streamline in its posterior part. The ventral fins insertion is positioned a little in the back of the dorsal fin insertion. The pectorals, ventrals, and the anal fins are rounded, the dorsal fin with a plain edge and rounded corners, the caudal fin with a plain edge. The scales are oviform. The fundamental colour is white-yellowish on which exist numerous brown-greyish spots, distributed in regular series. A series of 12 -

Cobitis taenia Linnaeus, 1758 - Natura 2000 code 1149 (RO-zvârlugă, fîsă, cîră, zmorlă, rîmbiţar; DE-Dorngrundel, Steinbeisser; FR-Loche de rivière; GB-Spined Loach; RU-Shtschipovka; UK-Shtschipovka; HU-Vágó csík; BG-Piskal; CS-Vijun).

Someş River (from Benesat to Tămaia); Someş River (from Arduşat to the Romanian-Hungarian national border); the limitrophs canals of Crasna River, in the Moftinu Mic, Moftinu Mare and Ghilvaci localities area.

19 spots on the dorsal median line, rounded and relatively closed. On the flanks of the body are 10 - 13 prolonged spots, rounded at their ends, distributed regularly. Among the dorsal and the lateral spots, the pigmentation is distributed like three longitudinal zones. A black oblique, very intense spot is present at the caudal base, under this one is a brown spot. On the head are short winding spots. A broad oblique line exists from the tip of the snout to the eye, rarely prolonged over the eye.

Regarding the *Cobitis elongata* species, at the Continental Biogeographic Seminar meeting from Sibiu 9–12 June 2008, there were stressed some conclusions about this species sites as insufficient moderate. It was stated the fact that more sites will be needed and also extension of the already proposed and accepted sites were required on the Romanian national territory. In this respect new sites for this species are proposed below.

Proposed sites. Nera River needs to be completely (the Romanian sector) part of the Natura 2000 net, not only its upper part as it was proposed first in the Continental Biogeographic Seminars for Romania. Caraş River, at least 2-3 km downstream of Caraşova locality and at least 2-3 km upstream of Goruia locality, possible upstream and downstream of this sector.

More scientific researches can improve this proposals with new sites.

A general descriptive fact sheet is presented here to allow the identification, without confusion with other *Cobitis* and *Sabanejewia* genera species, by some of the European Natura 2000 sites administrations members for the necessary biological and ecological assessment, monitoring and management activities.

Descriptive elements. The dorsal and ventral profiles are almost horizontal. The inter-orbitary space is plain. The two halves of the inferior lip are subdivided in 3 - 4 lobes. The third pair of whiskers are the longest. The caudal peduncle in its posterior part has a dorsal and a ventral streamline, the last one more developed. The ventral fin insertion is situated a little backward in comparison with the dorsal fin insertion. The caudal fin is truncated or slightly holed. The pectoral and ventral fins are rounded. The lateral line is short, in general does not overdraw the pectoral fin. The body background is white-yellowish. The dorsal spots are small, rectangular or rounded, close, in variable number (13 - 24). The lateral pigmentation of the body consists of four zones. At the caudal fin base in the upper corner, is a clear veryical black intense spot. On the head are small spots and an oblique line, from the backhead to the mouth. It can reach 12 centimeters in length. (Bănărescu and Bănăduc, 2007)

Regarding the *Cobitis taenia* species, at the Continental Biogeographic Seminar meeting from Sibiu 9–12 June 2008, there were stressed some conclusions about this species proposed sites as insufficient minor and scientific reserve in the Olt River.

Misgurnus fossilis (Linnaeus, 1758)
- Natura 2000 code 1145 (RO-țipar, chișcar, vârlan; GB-Weatherfish; FR-Kerlèche; DE-Wetterfish, Beitzger, Moorgrundel; HU-réti csik, UA-Viun; BG-Zmiorche; HU-Réti csík; CS-Cikov).

A general descriptive fact sheet is presented here to allow the identification of this species by some of the European Natura 2000 sites administrations members for the necessary assessment, monitoring and management activities.

Descriptive elements. Prolonged and thick body with almost uniform height. The dorsal and the ventral profiles are almost horizontal. The head is thick, slightly compressed laterally. The nostrils are more closed to the eyes than to the tip

New sites for this species are proposed below.

Proposed sites. The accumulation lake from the Crasna river (between Crasna and Vârșoț localities); a few lakes from the middle of Transylvania (near Geaca and Cătina localities, near Zau de Câmpie and Șăulia localities); Mureș River with its adjacent wetlands, 5 km upstream of the confluence with Târnava River to 3 km downstream of the confluence with Ampoi River; Mureș River (from Băcăinți to Șoimuș); Siret River between Adjutul Vechi and Burcioasa localities; Siret River between Buhoci and Furnicari localities; Someș River between Bozânta Mică and Năpradea; Someș River between Pomi locality and the national border between Romania and Hungary; Olt-Cibin-Hârtibaciu confluence area; Râul Negru River from Lemnia to the confluence with the Olt River; Moldova River between Oniceni and Mitești; Moldova River between Tupilați and Roman localities; Teleorman River between Măgura and the confluence area with Vedea River. Crișul Alb River, from Ineu to Chișineu-Criș; Someșul Mic River from Petrești to Gherla; Vedea River from Ghimpețeni Noi to Beiu.

More scientific researches can improve this proposals with new sites.

of the snout. The anterior nostril is tubular, round, covered by a skiny operculum. The mouth is inferior and crescent. The upper lip is fleshy and continuous. The lower lip is fleshy with two pairs of fleshy lobes; the anterior pair (and median) short and thick, the posterior pair long and thin whiskers like. The caudal peduncle is laterally compressed, mostly in its posterior part. The caudal dorsal and ventral peduncle edges are straiten and form two faty streamlines which is looking like a elongation of the caudal fin. The dorsal and ventral fins are situated at the same level. Small scales. Hardly visible lateral line. The dorsal side is dark dun, with small sooty spots. This dun area is limited by a narrow longitudinal

line, almost black, which lay from the superior corner of the operculum to the caudal fin; in the posterior part this line is interrupted by isolated spots. Under this line, the body is light dun; is following a new sooty line, very broad, continuous from the eye to the caudal fin base. Under this line is yellowish-rusty spotted with brown dots. The head is light-fawn with small dark spots. Smoky fins with dark spots. The females reach 30 cm, the males are smaller. (Bănărescu and Bănăduc, 2007)

Regarding the *Misgurnus fossilis* species, at the Continental Biogeographic Seminar meeting from Sibiu 9–12 June 2008, there were drawn some conclusions about this species proposed sites as insufficient moderate. More sites were required and also extension of existing sites were required on the Romanian national territory, especially in the Mureș

Gymnocephalus schraetzer (Linnaeus, 1758) - Natura 2000 code 1157 (RO-răspăr, șpîrlui, bălos, firizar; DE-Schraetzer, Schratz; GB-Schraetzer, Striped Ruffe; HU-Selymes durbincs; UK-Yersh polosatyi).

A general descriptive fact sheet is presented here to allow the identification, without confusion with others species of the *Gymnocephalus*, by some of the European Natura 2000 sites administrations members for the necessary biological and ecological assessment, monitoring and management activities.

Descriptive elements. The body is relatively prolonged. The dorsal profile draw up almost directly from the tip of the snout to the dorsal fin insertion, descending afterwards. Looking from the lateral sides of the head looks like a triangular shape. The ventral profile is almost horizontal. The eyes are located towards in the posterioir part of the head, looking more lateraly. The mouth is small and terminal, its opening is situated anteriour to the nostrils. The dorsal side and the flanks are yellow and the ventral side

River basin and on the Danube. It was concluded also the fact that more sites will be needed and also extension of the already proposed and accepted sites were required on the Romanian national territory. In this respect new sites for this species are proposed.

Proposed sites. Someșul Mic River and its lateral dead branches, at Gherla; Mureș River with its dead branches in its adjacent wetlands, from 5 km upstream of the confluence with Târnava River to 3 km downstream of the confluence with Ampoi River; Someș River and the adjacent wetlands between Culciu Mic to Adrian and Dorolt localities. Râul Negru River and its lateral dead branches from Lemnia to the confluence with the Olt River; Siret River between Adjutul Vechi and Burcioasa; Siret_River between Buhoci and Furnicari.

almost white. On the dorsal side of the body are three thin longitudinal black-blueish lines. Two, sometimes three of them are intrerupted. On the hard dorsal fin membrane part exist three rows of round, big and black spots. The soft part of the dorsal fin membrane and the other fins are colourless. The iris is black. It can reach a maximum of 24 cm of the body length. (Bănărescu and Bănăduc, 2007)

Regarding the *Gymnocephalus schraetzer* species, at the Continental Biogeographic Seminar meeting from Sibiu 9–12 June 2008, there were stressed some conclusions about this species proposed sites as insufficient moderate. It was stated the fact that more sites will be needed and also extension of the already proposed and accepted sites were required on the Romanian national territory. In this respect new sites for this species are proposed.

Proposed sites. The Olt River at the confluence with Danube River, from 20 km upstream of the confluence.

More scientific researches can improve this proposals with new sites.

Zingel streber (Siebold, 1863) - Natura 2000 code 1160 (RO-fusar, fus, prundar, pește de piatră; GB-Streber, Danube Streber; DE-Streber, Strever, Ströber, Strengkatze, Zigel; HU-kis bucó, német bucó; UK-Chop malyi; SK-Kolok malý).

A general descriptive fact sheet is presented to allow the identification, without confusion with *Zingel zingel* species, by some of the European Natura 2000 sites administrations members for the assessment, monitoring and management activities.

Descriptive elements. Elongated body, skewer-like shape. The dorsal profile of the body ascend slightly, uniform and straight from the tip of the snout to the first dorsal fin insertion. The ventral profile is almost plain. The head is much broad than high, from an above perspective is triangular. The snout is obtuse, width in the posterior part, narrow in the anterior part. The mouth is inferior crescent-like shape and small. The caudal peduncle is long and thin, round in section. The dorsal fins are distanced and triangular, high anterior and decreasing gradually to the posterior part. The pectoral fins with truncated edge. The ventral fins are inserted behind the pectoral fins insertions. The scales are small. The lateral line is

Zingel zingel (Linnaeus, 1766) - Natura 2000 code 1159 (RO-fusar mare, pietrar, pește cu două nume; GB-Zingel; DE-Zingel, Zindel, Zink, Zinne, Zint; CS-Veliki vretenac; HU-nagy bucó; BG-Uretenarka; SK-Kolok veľký; UK-Chop).

A descriptive fact sheet is presented here to allow the identification, without confusion with *Zingel streber* species, by some of the European Natura 2000 sites administrations members for the necessary biological and ecological assessment, monitoring and management activities.

Descriptive elements. Elongated body, skewer-like shape, almost circular in section. The head is oval. The dorsal fins are relatively closely apart. Both dorsal fins are triangular, high anterior and decreasing gradually to the posterior part. The pectoral fins with truncated edge. The ventral fins are inserted behind the pectoral fins insertions.

complete and plain. The superior side of the head and of the body, and the majority of the flanks are brown-greyish with a green nuance. On this background are five wide sooty lines. The ventral side is white and the fins are colourless. It can reach over 20 cm in length. (Bănărescu and Bănăduc, 2007)

Regarding this species, at the Continental Biogeographic Seminar, there were stressed conclusions about its insufficient moderate status and it was stated the fact that more sites will be needed and also extension of the already proposed sites were required on the Romanian territory, especially regarding some stepping stones in Danube and Mureș rivers. In this respect new sites for this species are proposed.

Proposed sites. The confluence of the Olt River with Danube River, from Scărișoara; Siret River between Adjudul Vechi and Burcioasa; Siret River between Buhoci and Furnicari; the confluence of the Olt River with Danube River, 20 km upstream of the confluence; Mureș River 5 km upstream of the confluence with Târnava River to 3 km downstream of the confluence with the Ampoi River.

More scientific researches can improve this proposals with new sites.

The scales are small, on the ventral side they reach the ventral fins base. The dorsal side and the majority of the flanks are brown-greyish. The ventral side and the abdomen are yellowish. It can reach a maximum body length of 49 cm. Bănărescu and Bănăduc, 2007)

Regarding the *Zingel zingel* species, at the Continental Biogeographic Seminar meeting from Sibiu 9–12 June 2008, there were stressed some conclusions about this species proposed sites as insufficient moderate. It was stated the fact that more sites will be needed and also extension of the already proposed and accepted sites were required on the Romanian national territory, especially stepping stones in Danube and Mureș rivers. In this respect new sites for this species are proposed below.

Proposed sites. The confluence of the Olt River with Danube River, from Scărișoara Siret River between Adjutul Vechi and Burcioasa; Siret River between Buhoci and Furnicari; the confluence of the Olt River with Danube River, 20 km upstream of the confluence; Mureș River 5

km upstream of the confluence with Târnava River to 3 km downstream of the confluence with the Ampoi River; Someș River between Păulești locality and the Romanian-Hungarian national border.

More scientific researches can improve this proposals with new sites.

ACKNOWLEDGEMENTS

The authors thank to the Faculty of Science of the □Lucian Blaga□ University of Sibiu, NGO Ecotur Sibiu and WWF-DCP for the support during the field campaigns. The first author is grateful to the European Comitee representatives and Topic Center representatives for the official allowance at the Continental Biogeographic Seminars for Romania and Bulgaria.

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AUTHORS:

¹ *Doru BĂNĂDUC*

¹ *Angela CURTEAN-BĂNĂDUC*
ad.banaduc@yahoo.com

“Lucian Blaga” University of Sibiu, Faculty of Sciences, Department of Ecology and Environment Protection, 5-7, Dr. Ioan. Rațiu Street, Sibiu, Sibiu County, Romania, RO-550012.

² *András Attila NAGY*
andasattila.nagy@milvus.ro

“Milvus” NGO, “Milvus Group” Bird and Nature Protection Association, Crinului Street 22, Târgu Mureș, Mureș County, Romania, RO-540343.