Table S1. Some appearance and morphological features of the European Invertebrates of Community Importance (Natura 2000) from Bârnova-Repedea Forest in Romania (ROSCI0135).

Nr. Crt.	Species	Figures	Morphological features
1.	*Helix pomatia*	Figure 2a	It is a large terrestrial snail with a shell width of 30–50 mm and a height of 30–45 mm. The shell is globose, with five to six whorls, a blunt apex, and a large aperture. It is creamy white to light brownish, with more or less distinct brown colour bands.
2.	*Cordulegaster heros*	Figure 2b	It is a big dragonfly, measuring 80–100 mm in body length with black and yellow being the colour of the body.
3.	*Coenagrion ornatum*	Figure 2c	It is a small damselfly, with a body length of approximately 30 mm, characterized by a black and blue coloration.
4.	*Paracaloptenus caloptenoides*	Figures 2d,e	It is a brown-grey-yellow micropterous grasshopper, with males reaching about 20 mm in length and females around 30 mm.
5.	*Carabus variolosus*	Figure 2f	It is a large, entirely black beetle, approximately 30 mm in body length. It is flightless, with strongly convex elytra and a characteristic sculpture consisting of four rows of pronounced rugosities and large, deep grooves on each elytron [39,40].
6.	*Rhysodes sulcatus*	Figure 2g	It is a small beetle, about 8 mm in body length, with a cylindrical elongated reddish-brown body with three grooves on the pronotum and eight coarsely punctate sulci on the elytra [45].
7.	*Cucujus cinnaberinus*	Figure 2h,i	It is a medium-sized beetle, with a body length of up to 15 mm. Its dorsal surface is predominantly bright red, while the antennae, mandibles, eyes, inner side of postgenae, lateral margins of the pronotum, prosternum, pronotal epipleurae, mesosternum, metasternum, abdominal sternites, and legs are black. The body is flat, with the head and pronotum relatively glossy, with a thick and accentuated punctuation. The elytra are matte, with shallow longitudinal striae and two fine lateral carinae. The head is triangular, with strongly pronounced temples and the pronotum is transverse with serrated lateral margins [20,40,49,50]. The larvae have a pale yellow to reddish brown body, are extremely flat, and reach approximately 30 mm in length when fully grown. The head is broader than the pronotum, the antennae are short, and the last segment bears four cerci, with the middle ones being longer and slightly curved.
8.	*Rosalia alpina*	Figure 2j	It is a large and beautifully charismatic beetle species, reaching up to 40 mm in body length. The body is blue-grey, covered with a greyish-blue, velvety pubescence, which serves as effective camouflage on the bark of the typical host tree, the European Beech (*Fagus sylvatica* L.). The long antennae and the legs have the same colour pattern, with antennal articles 3 to 6 blue and bearing apical tufts of black hairs. The pronotum has a sharp lateral denticle. The elytra

			have black velvety bands and spots, which can vary greatly in pattern and intensity [39,58,59]. These colour aberrations are an additional reason for collecting and using the adults in trade for exchange with other beetles [59].
9.	*Morimus funereus*	Figure 2k	It is a large beetle species, up to 40 mm length in body length, and is easy recognisable. The body is black with a very dense, silvery greyish-silvery pubescence on the dorsal side. The pronotum have laterally a strong sharp tooth apically. The elytra have two well-outlined, velvety black spots. It is unable to fly, as the hindwings are reduced, and the elytra are fused together. In males, the antennae are 1.5 times longer than the elytra, while in females, they are about the same length as the elytra [20,39,58].
10.	*Cerambyx cerdo*	Figures 2l, m	It is one of the biggest beetles from Romania and Europe, with a body length of over 50 mm. It is an iconic, charismatic species. The body is black brown with light reddish-brown elytral tips and appears glossy above, with the pronotum and elytra having extremely fine pubescence. The pronotum is strongly sculptured, with two noticeable lateral thorns. The antennae are longer than the body in males, reaching the tip of the elytra in females [20,39,58]. The larvae are similar to other longhorn beetles. The full-grown larva is up to 9 cm in length and 2 cm in width.
11.	*Lucanus cervus*	Figure 3a-d	It is the largest beetle from Europe and Romania, and is a very imposing, iconic species, especially the male. This species exhibits pronounced sexual dimorphism, the male being bigger—reaching up to 90 mm in body length—and possessing very big mandibles and a broad head, wider than the pronotum (Figure 3a). The head and pronotum are black, while the elytra range in colour from brown to reddish-brown. The large male mandibles are reddish, usually bifurcate at the apex, with strongly denticulated inner edges and a prominent internal antemedian tooth. These mandibles have the appearance of antlers and are used in fighting between males similar to deer antlers, originating the common name of the species. Females are smaller, reaching up to 50 mm, with normal mandibles and a head narrower than the pronotum [20,39,40,70]. The larvae are oligopod and whitish, with a reddish-brown to orange head capsule and short brownish bristles on the ventral, terminal part of the body. They have nine pairs of spiracles and a stridulatory apparatus on the second and third pairs of legs.
12.	*Bolbelasmus unicornis*	Figure 3e	It is a medium-sized beetle, with a body length of up to 15 mm. The body is roundish, almost hemispherical, and reddish in colour, with a slightly darker head and legs. The surface of the body is shiny and covered with dense hairs, and yellowish on the ventral side. The pronotum has sharp, thick punctuation, with a smooth, unpunctuated stripe near the lateral edges. The elytra have punctate longitudinal striations with smooth interstriations. The anterior tibiae are

			adapted for digging, with the outer edge bearing 7–8 small teeth, the two apical ones being more developed. Sexual dimorphism is pronounced. Females have 3 inconspicuous frontal tubercles on the head, connected by a fine carina. Males have a steeply inclined pronotum at the front, with 4 obtuse teeth and a lateral depression, with a robust frontal horn on the head.
13.	*Osmoderma eremita*	Figures 3f,g	It is a large scarabaeid beetle, with a body length of up to 40 mm, slightly convex, dorsally hairless, dark brownish, shiny, sometimes with cupreous-bronze-green metallic reflections. The head is small comparative with the body, and the pronotum is narrower than the elytra. The fore tibiae have three teeth. The posterior wings are well developed in both sexes [20,39,40,81]. The larvae have a typical scarabaeiform appearance with a large, up to 6–8 cm length, fat, white, C-shaped body and a red-orange head capsule. The raster does not have a palidia (spinules), and the tarsal claws are short and thick, with a blunted apex.
14.	*Parnassius mnemosyne*	Figure 3h-j	It is a relatively large diurnal butterfly, with a wingspan of up to 70 mm, and is easy to recognize. The wings are white with black veins, with the apex of the anterior wings grey-transparent and a very distinctive two black spots on the anterior wings. The body is black, with yellow hairs on the prothorax and the latero-ventral flanks of the abdomen; the dorsal side is hairless in females, while the entire body is covered with white hairs in males. The larvae are black to brown with two dorsal lateral lines of yellow to orange spots. The pupa is brown.
15.	*Zerynthia polyxena*	Figure 4a-e	It is a medium-sized butterfly, with a wingspan of up to 60 mm, easy to recognize and impossible to confuse with any other species from Romania. Wings have a light-yellow base colour (lighter on the males), with a complex pattern of black bands and spots. The external marginal region of the wings features a characteristic black zigzag pattern. The terminal hindwings have small red terminal spots and smaller blue spots towards the edge of the wings. On the ventral side of the wings, there are red spots. The general body colour of the larva is beige, with black spots and orange tubercules ending in black, spiny tufts. The pupa is light brown.
16.	*Euphydryas maturna*	Figure 4f-i	It is a medium-sized diurnal butterfly, with a wingspan of up to 50 mm. It has a brown background colour (darker in males, lighter in females) and a pattern of bands and spots of different gradients of orange to white, featuring a distinct submarginal orange band that makes it relatively easy to recognise. Males have slightly sharpened tips of the anterior wings, while females have rounded tips. The body is black, with white hairs. The ventral side of the wings are caramel rust with dark cream bands and spots. The lull-grown larva is about 30 mm in the length of the body, and a dark colour, with dark tubercules and hairs, and yellow spots along the

			lateral and dorsal lines. The pupa is brightly coloured, with black and yellow spots on the white background.
17.	*Lycaena dispar*	Figure 4j-l	It is a medium-sized beautifully coloured diurnal butterfly, with a wingspan of up to around 40 mm. The name "dispar" come from its pronounced sexual dimorphism. The male has a quite striking appearance, with a bright red coppery-orange colour of the upper side of the wings, small black marginal border, white fringe hairs, and prominent black elongated discal spots. The female is slightly larger, with less bright wings, and a paler orange as the background. The anterior wings have a wider black marginal band with some black spots, while the posterior wings are predominantly brown with a submarginal orange band. The underside of the wings is very similar in males and females, featuring orange on the anterior wings and blue-grey as the background on the posterior wings (more blue on the basal area). The anterior wings have a marginal grey band and the posterior wings display a submarginal orange band; both wings have black spots. The larvae are green and pupa is brown.
18.	*Euplagia quadripunctaria*	Figure 4m,n	It is a medium-sized butterfly, with a wingspan of up to 60 mm, and is easy to recognize. The thorax is black with two creamy-white longitudinal bands on the sides. The antennae are long, black, and setaceous. The abdomen is orange with a single black spot on each tergum. The forewings are black, with a slight greenish tinge in young specimens, and creamy-white bands: one submarginal, one basal, and five obliques, two wider and longer, and three narrower and shorter. The bands before and after the middle band are sometimes reduced to thin lines, barely visible or even absent. The last oblique band, together with the submarginal band, forms a very characteristic "V" pattern. The posterior wings are red orange on the upper side, with three black spots that vary in size and shape. The anterior wings are yellow-orange and the posterior wings are orange on the ventral side, featuring several black and white bands and spots on the anterior wings and two black basal spots on the posterior wings. At rest, the adults have a triangular shape, with the forewings swept back, completely covering the hindwings. The young larvae are yellow-green and covered with black hairs. The full grown caterpillar is brown black, featuring three distinct lines of white-cream spots, two laterals and one dorsal, with orange-brown protuberances bearing long white-orange-brown bristles. The pupa is brown.