

Osnove morfologije i anatomije ptica



Zbog različitih uvjeta nastali različiti oblici ponašanja, izgled tijela i snaga leta, izgled kljuna, izbor hrane, izgled nogu...., a sve su to prilagodbe na tipove staništa (adaptivna radijacija)
Unatoč tome morfologija im je puno uniformnija nego u sisavaca baš zbog prilagodbe letenju



Ptice žive svuda i predstavljaju sve više trofičke nivoe.

generalni tip



lom oraha



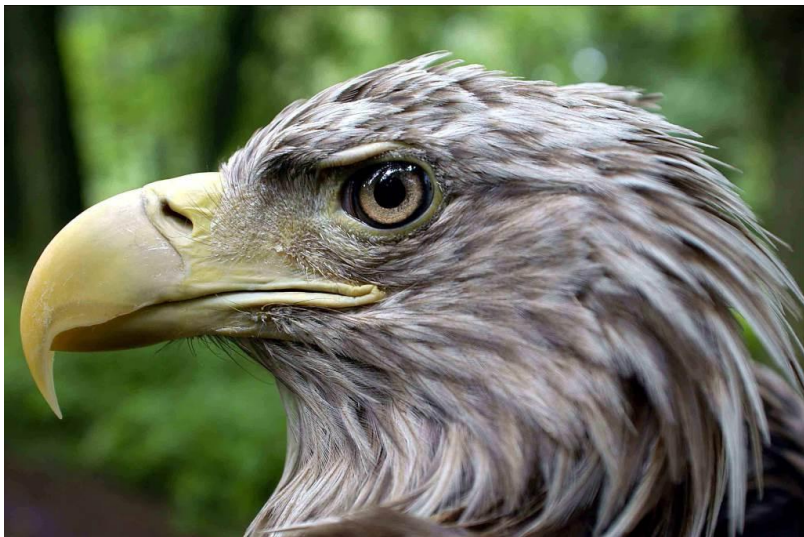
Prilagodbe kljunova

filtriranje



lov kukaca





trganje mesa



sisanje nektara



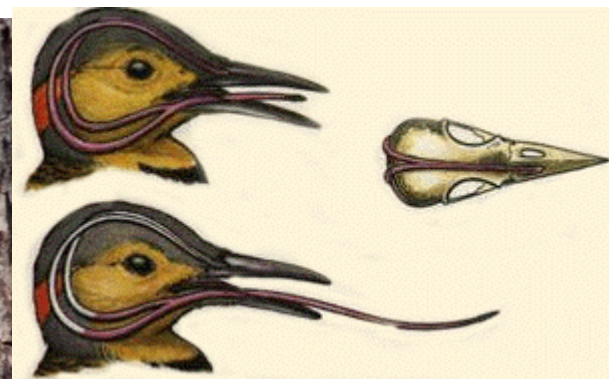
zadržavanje ribe



lom sjemenki



bušenje drveta



izbiranje sjemenki





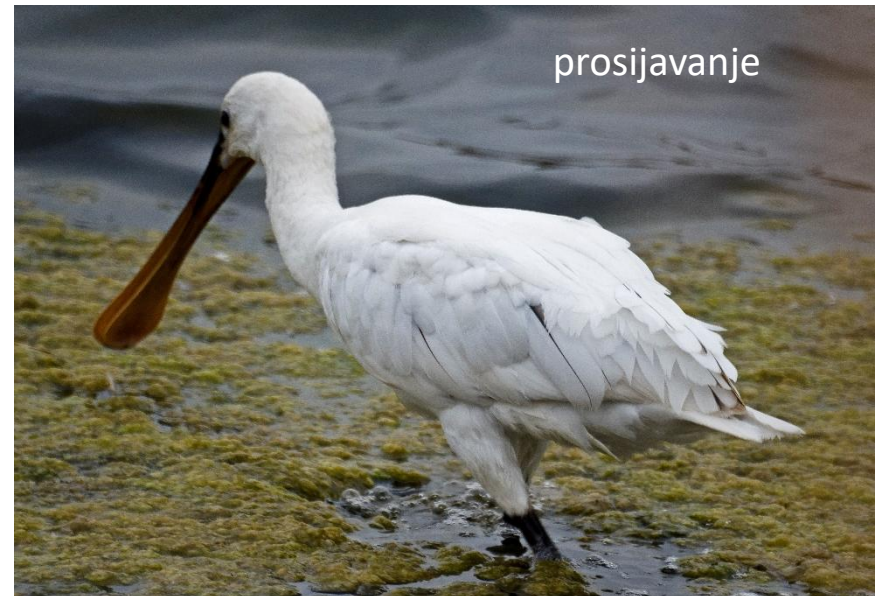
prosijavanje mulja



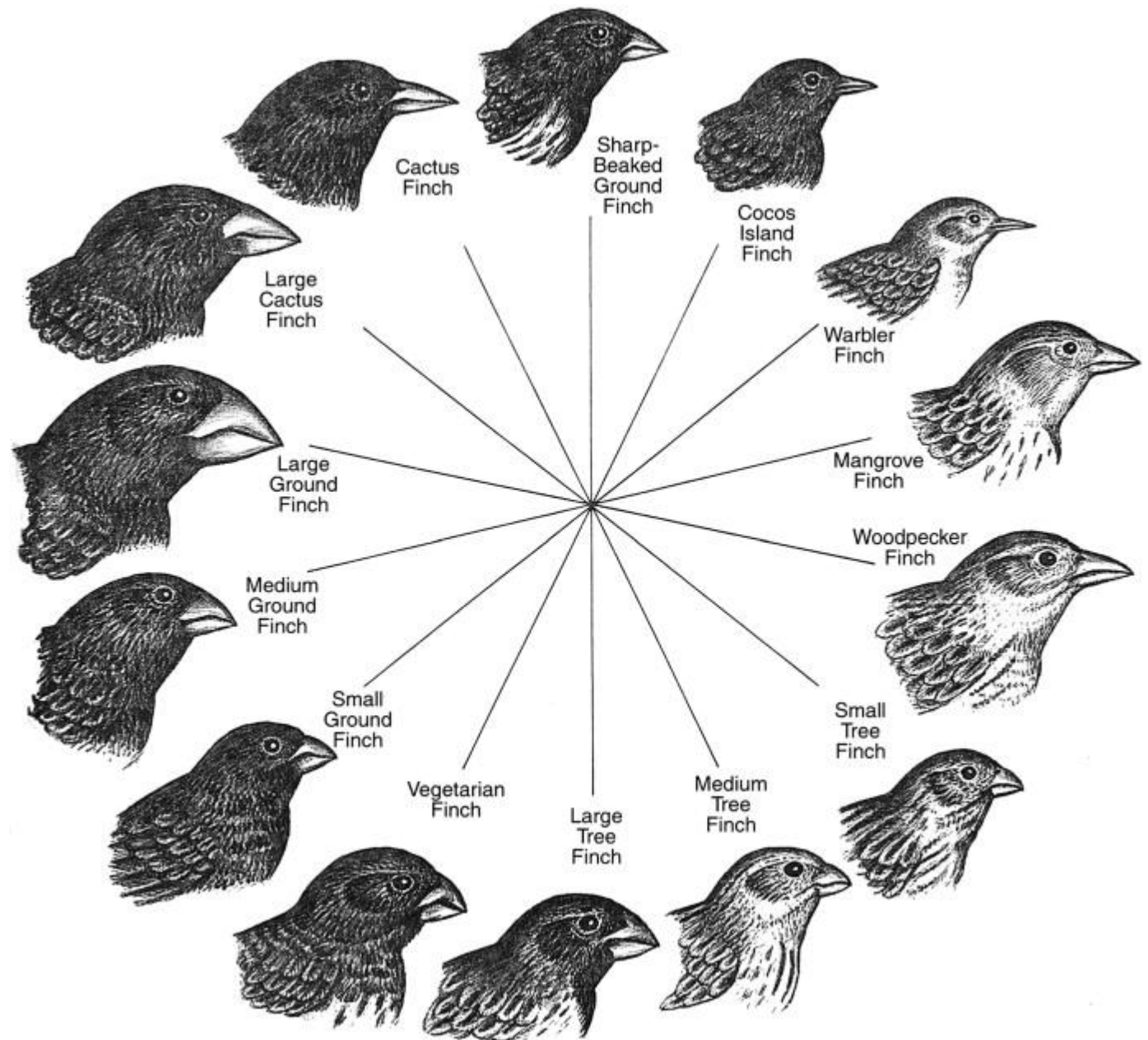
lov ribe



crvoliki beskralješnjaci u rupama



prosijavanje



Darwinove zebe

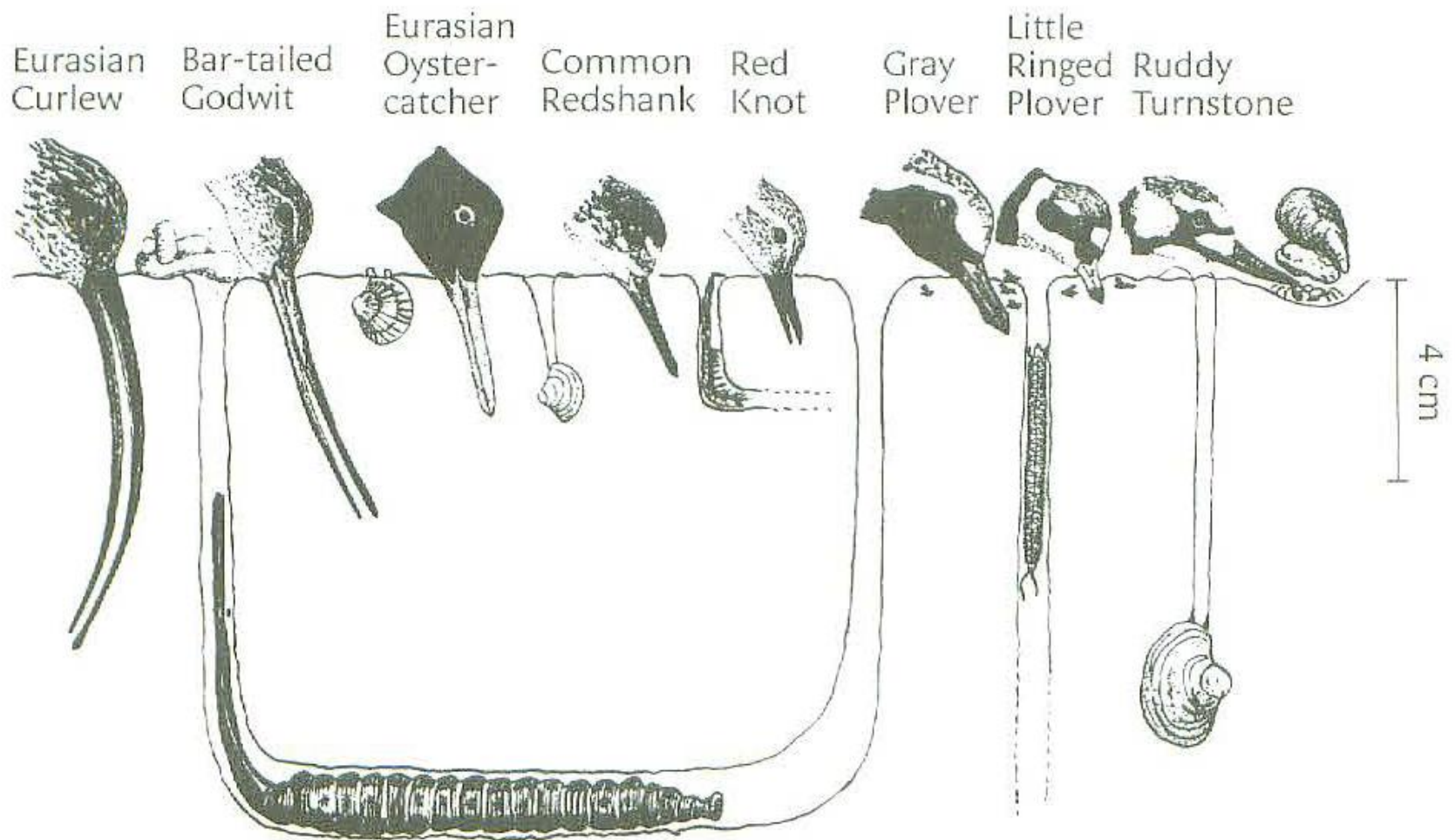
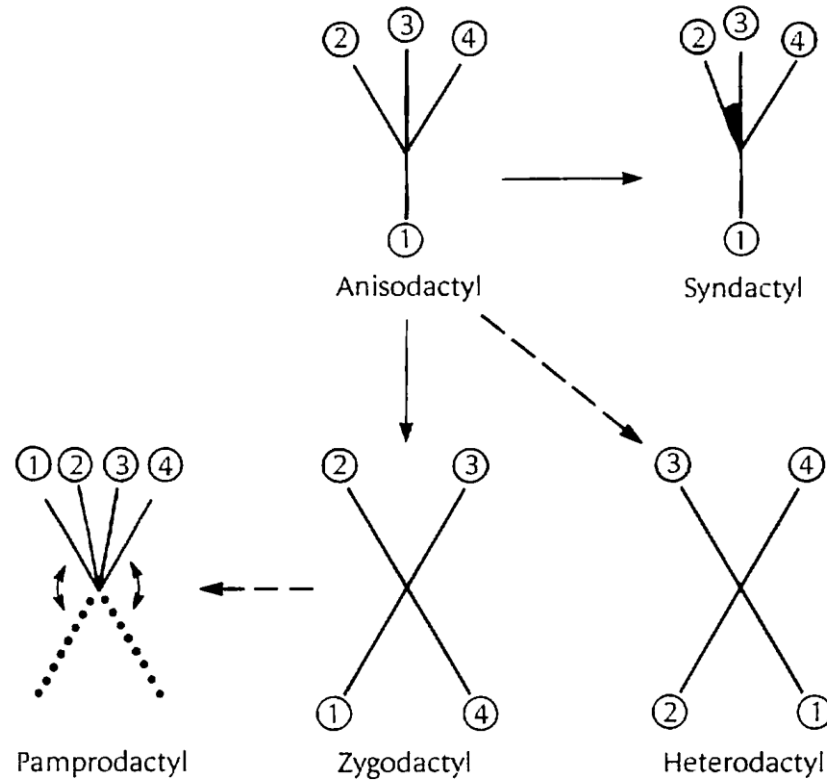
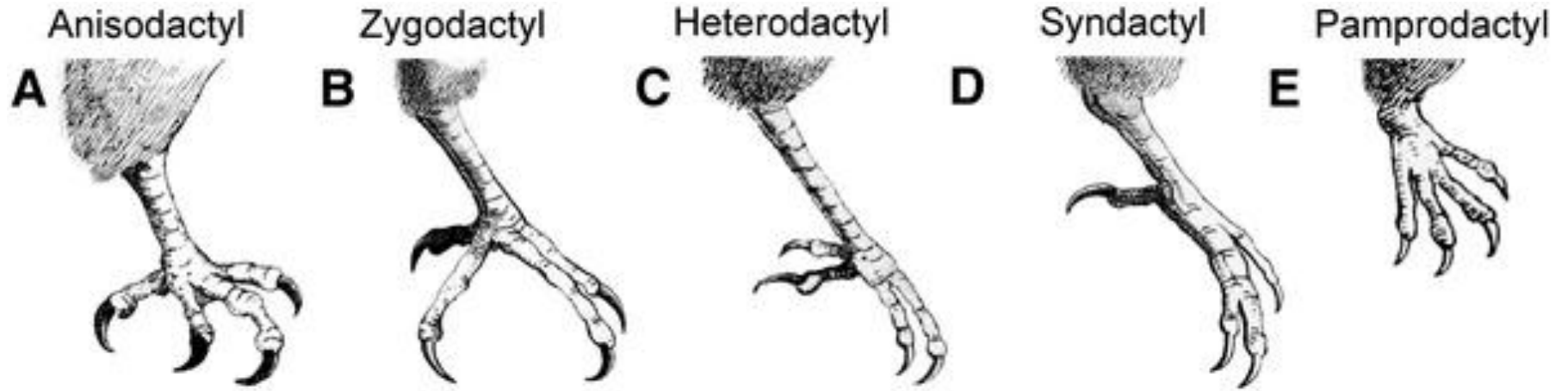


FIGURE 1–8 Varied bill lengths enable shorebirds to probe to various depths in the mud and sand for food. Plovers feed on small invertebrates, mainly by surface pecking with their short bills. Common Redshanks and other species of waders with moderate bill lengths probe the top 4 centimeters of the substratum, which contain many worms, bivalves, and crustacea. Only the long-billed birds such as curlews and godwits can reach deep-burrowing prey such as lugworms. [After Goss-Custard 1975]

Tipovi nogu



noge za trčanje



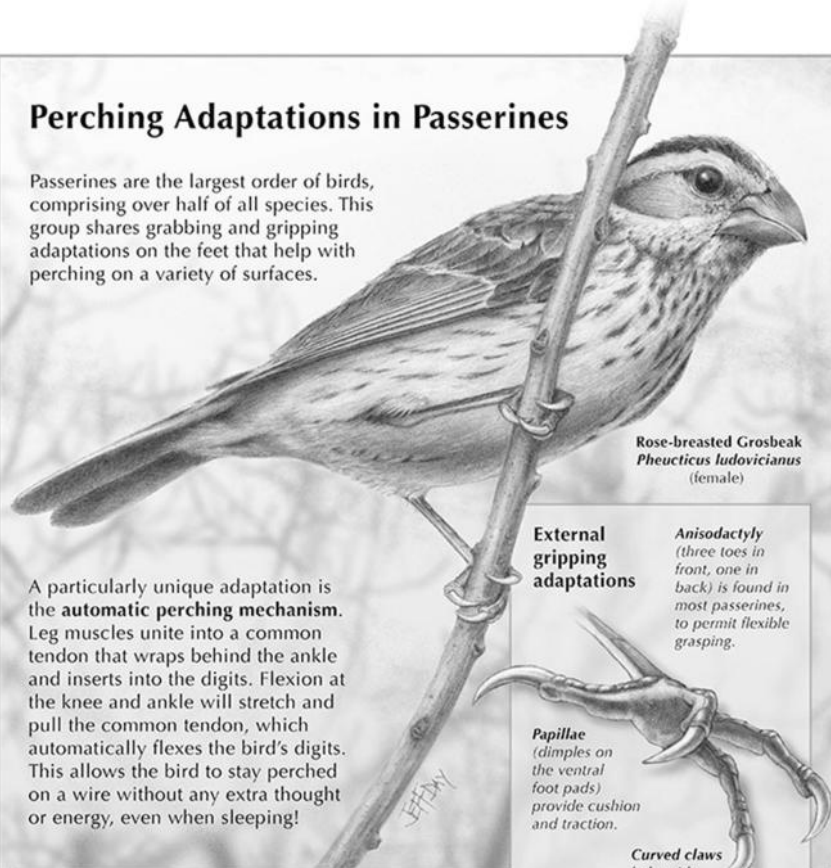
noge za prihvaćanje (*perching*)

noge za čeprkanje



Perching Adaptations in Passerines

Passerines are the largest order of birds, comprising over half of all species. This group shares grabbing and gripping adaptations on the feet that help with perching on a variety of surfaces.



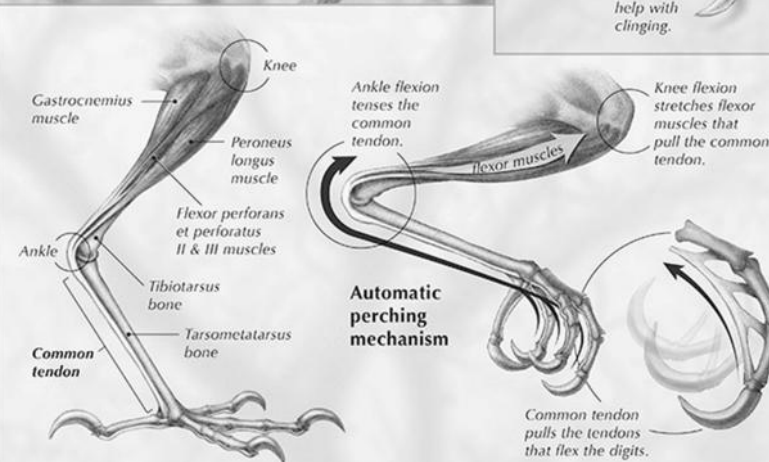
A particularly unique adaptation is the **automatic perching mechanism**. Leg muscles unite into a common tendon that wraps behind the ankle and inserts into the digits. Flexion at the knee and ankle will stretch and pull the common tendon, which automatically flexes the bird's digits. This allows the bird to stay perched on a wire without any extra thought or energy, even when sleeping!

External gripping adaptations

Anisodactyly (three toes in front, one in back) is found in most passerines, to permit flexible grasping.

Papillae (dimples on the ventral foot pads) provide cushion and traction.

Curved claws help with clinging.



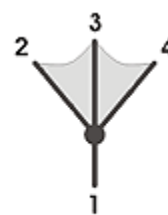
noge za gacanje



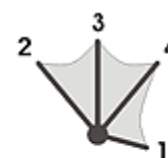
noge grabljivica



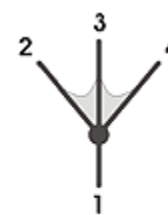
noge za plivanje



Palmate



Totipalmate



Semipalmate



Lobate



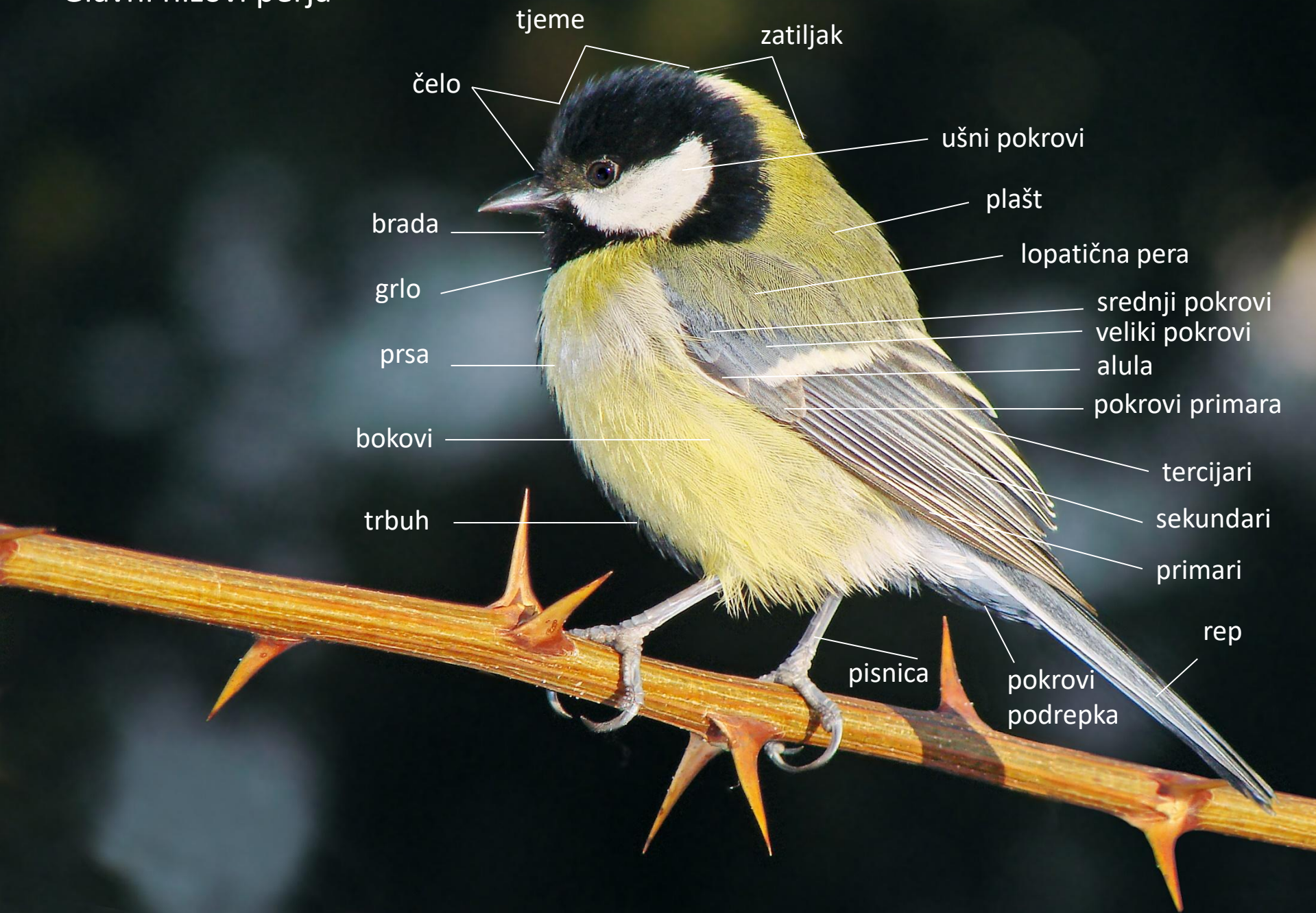
noge za penjanje



noge za vješanje



Glavni nizovi perja



Šare na ruhu

mrļa baze sekundara



ploha



vrhovi primara

trtična mrlja

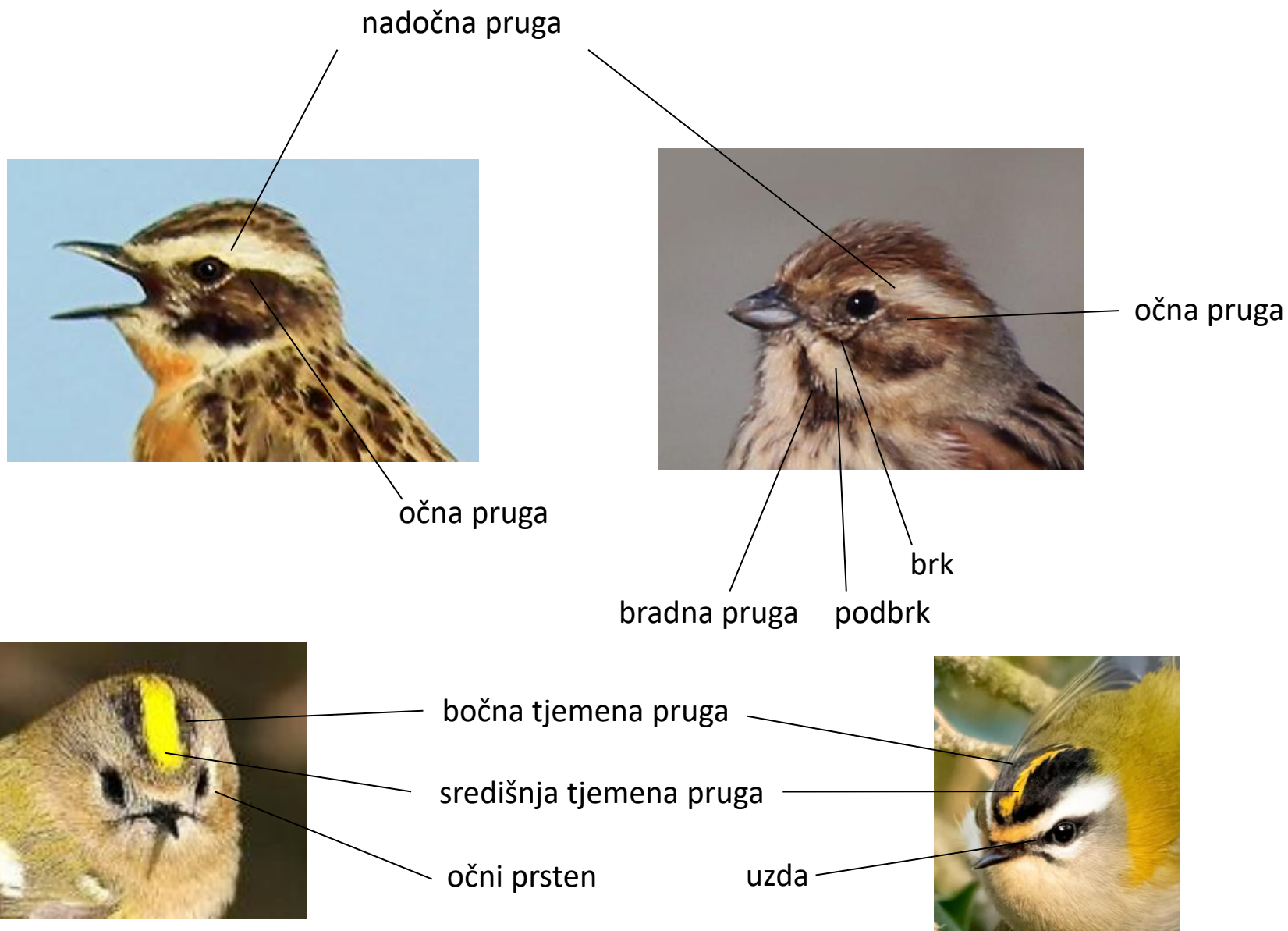


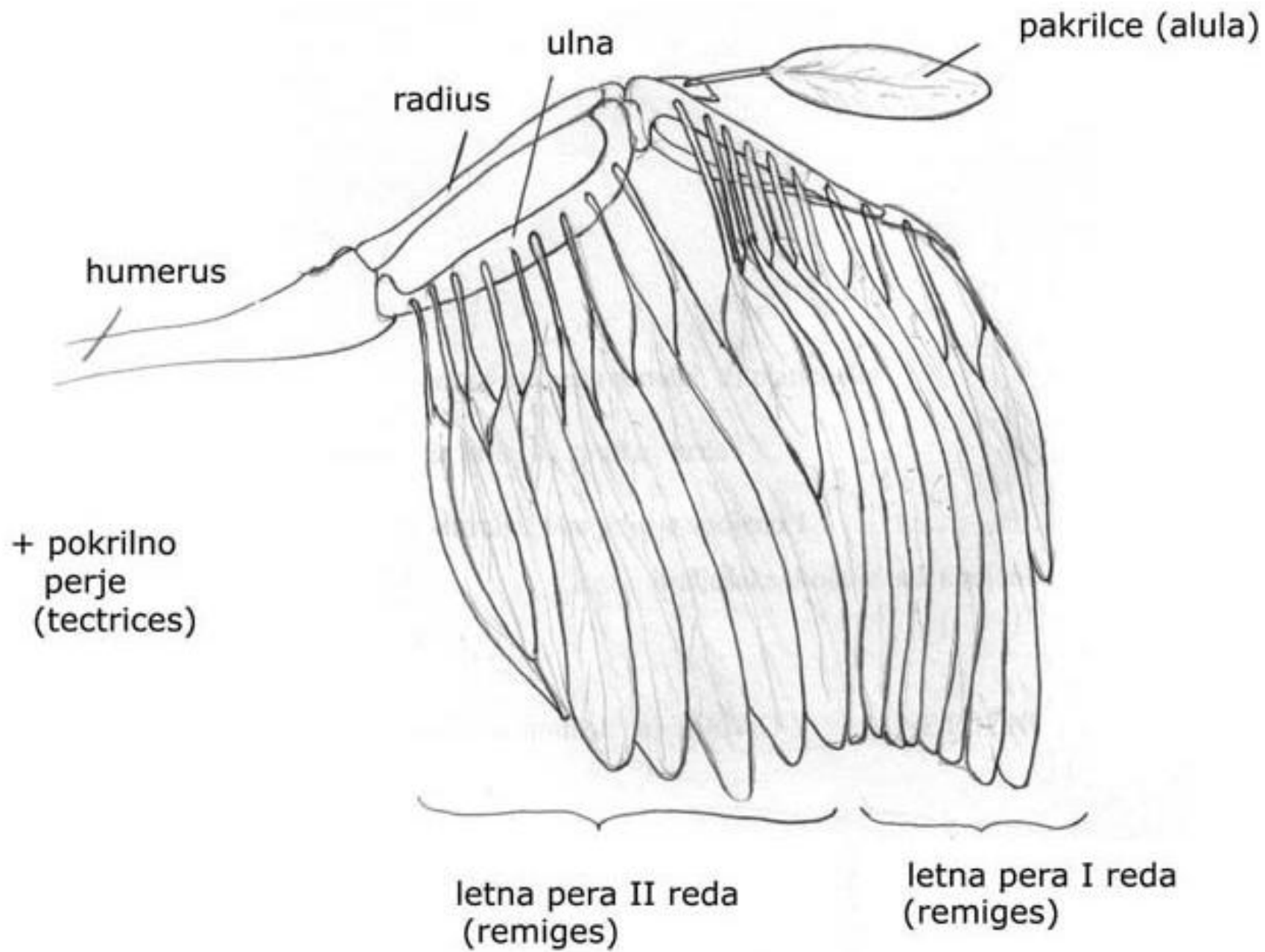
mrļa baze primara

pruga velikih pokrova

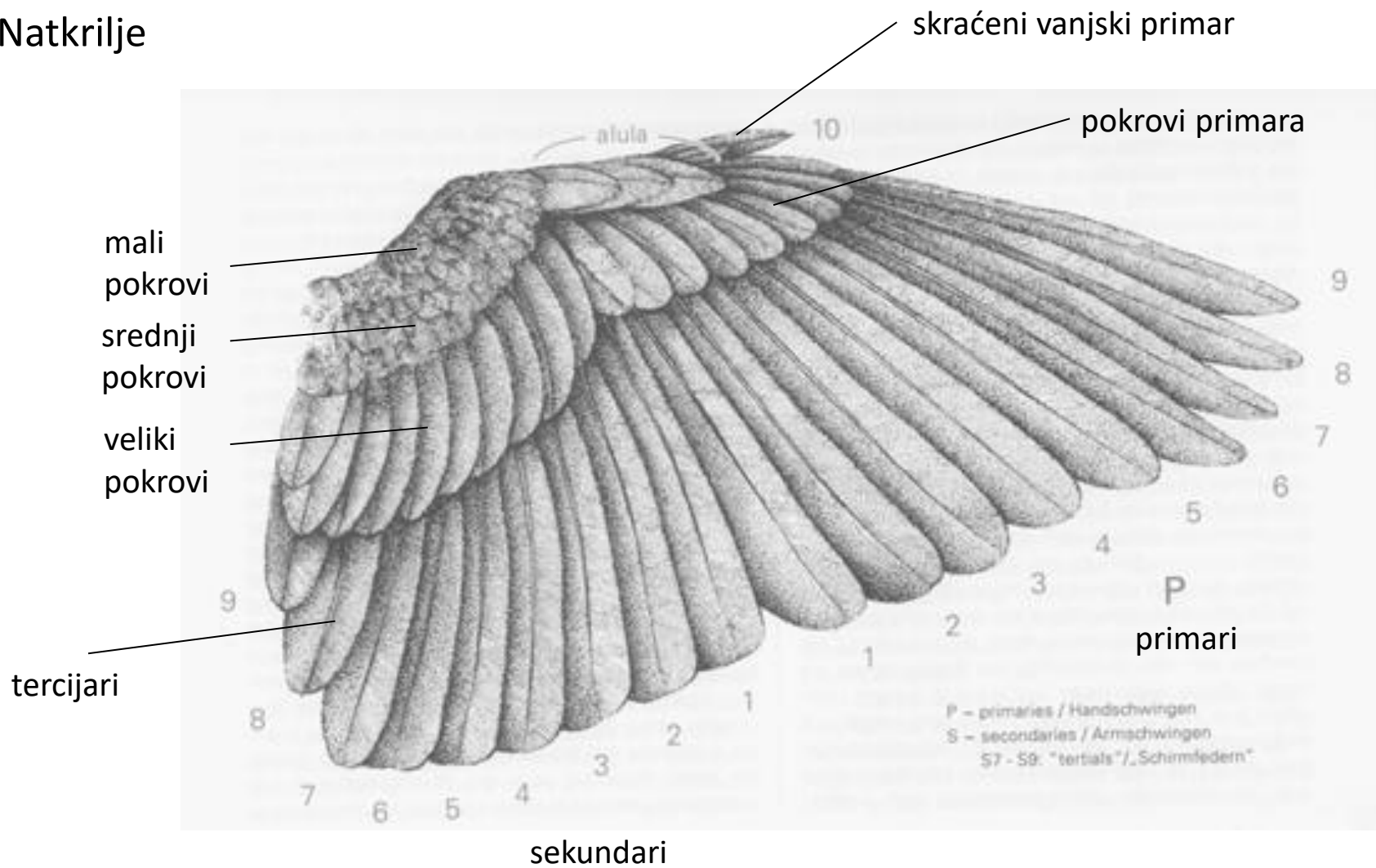


Šare na glavi



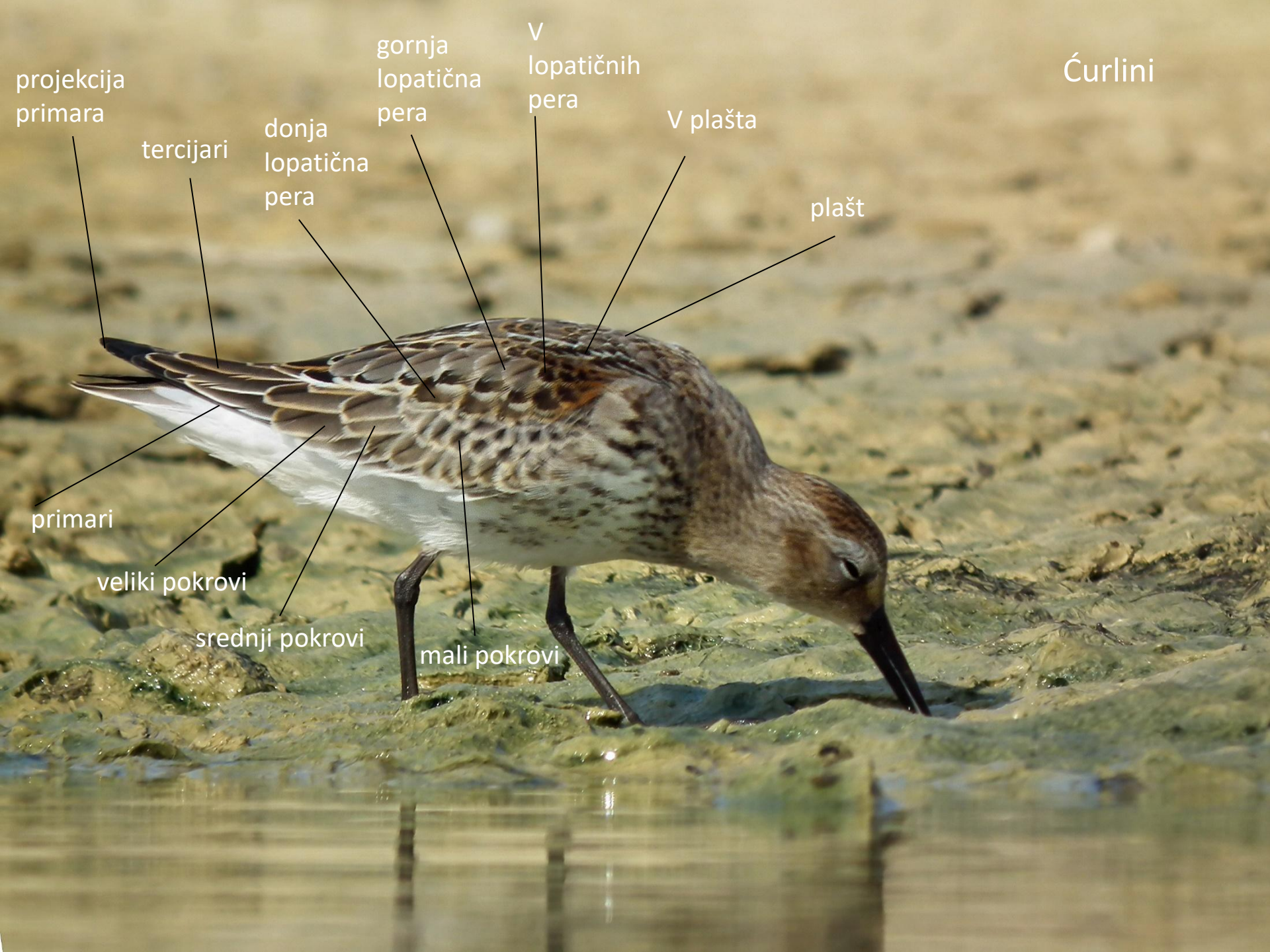


Natkrilje



urez (suženje vanjske zastavice)

Ćurlini



projekcija
primara

tercijari

donja
lopatična
pera

gornja
lopatična
pera

V
lopatičnih
pera

V plašta

plašt

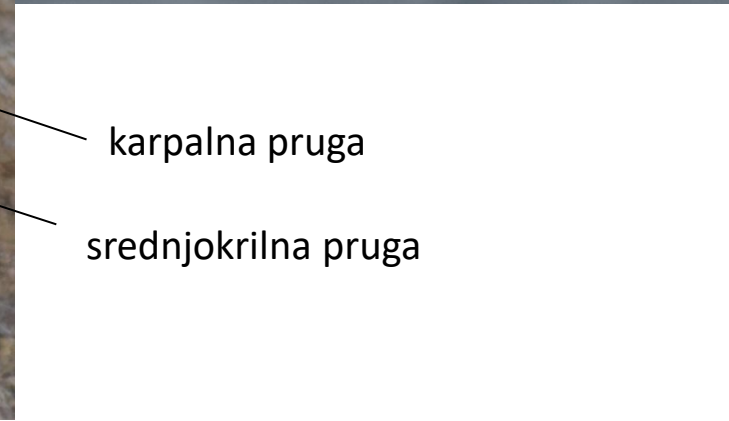
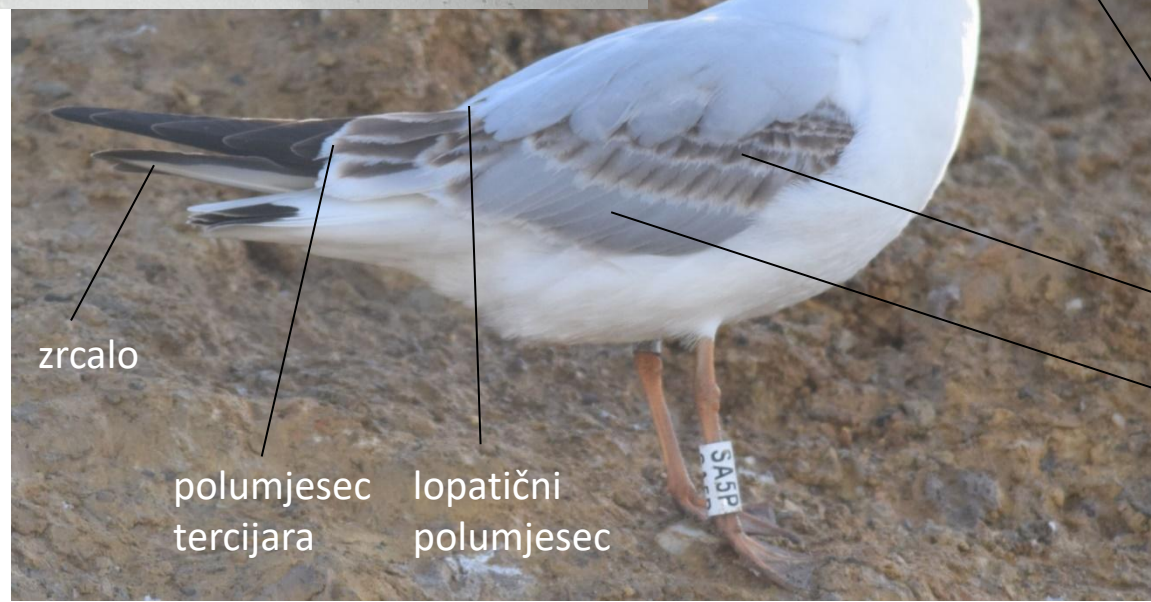
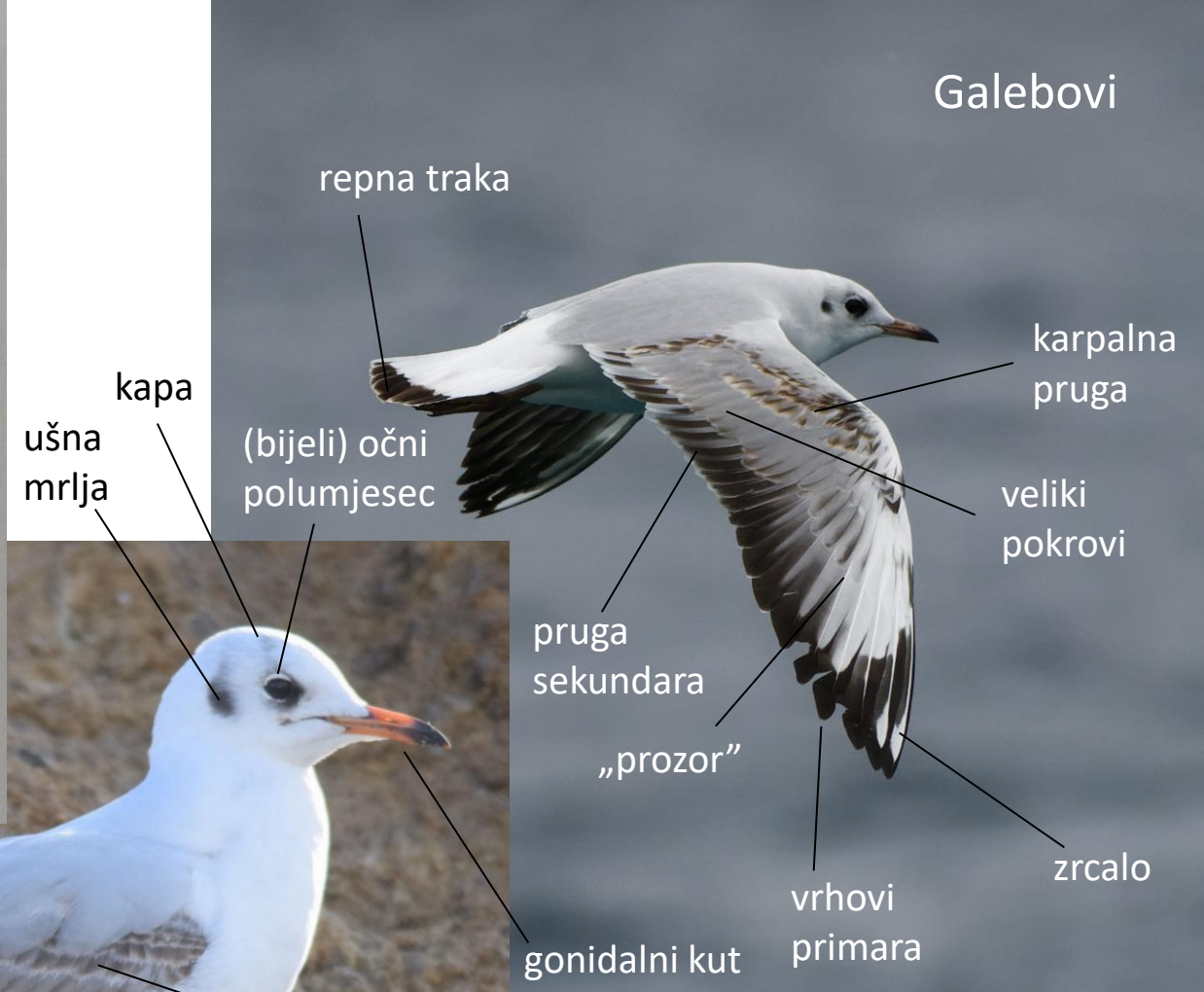
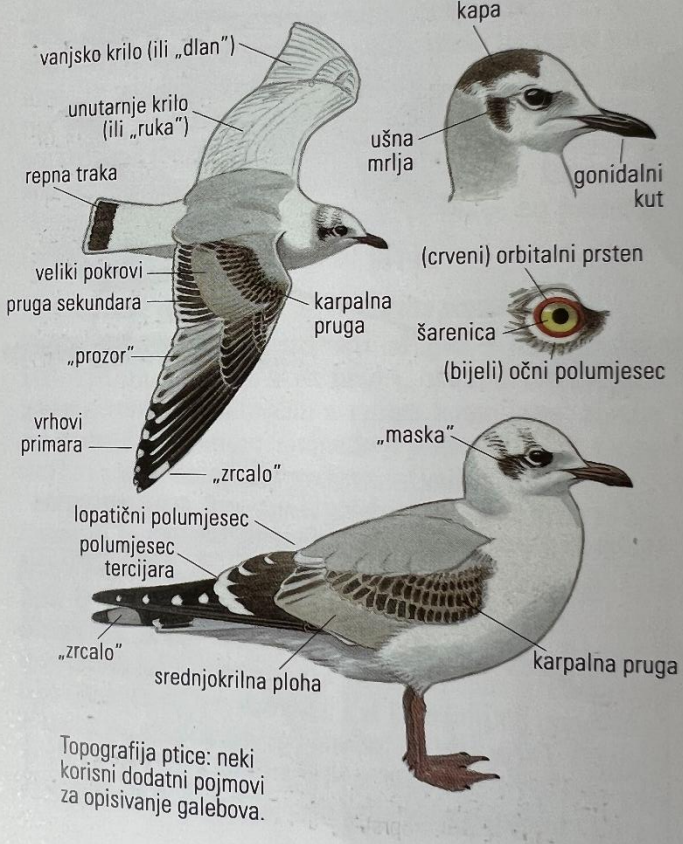
primari

veliki pokrovi

srednji pokrovi

mali pokrovi

Galebovi



Galebovi

šarenica

crveni orbitalni prsten

gonidalni kut

