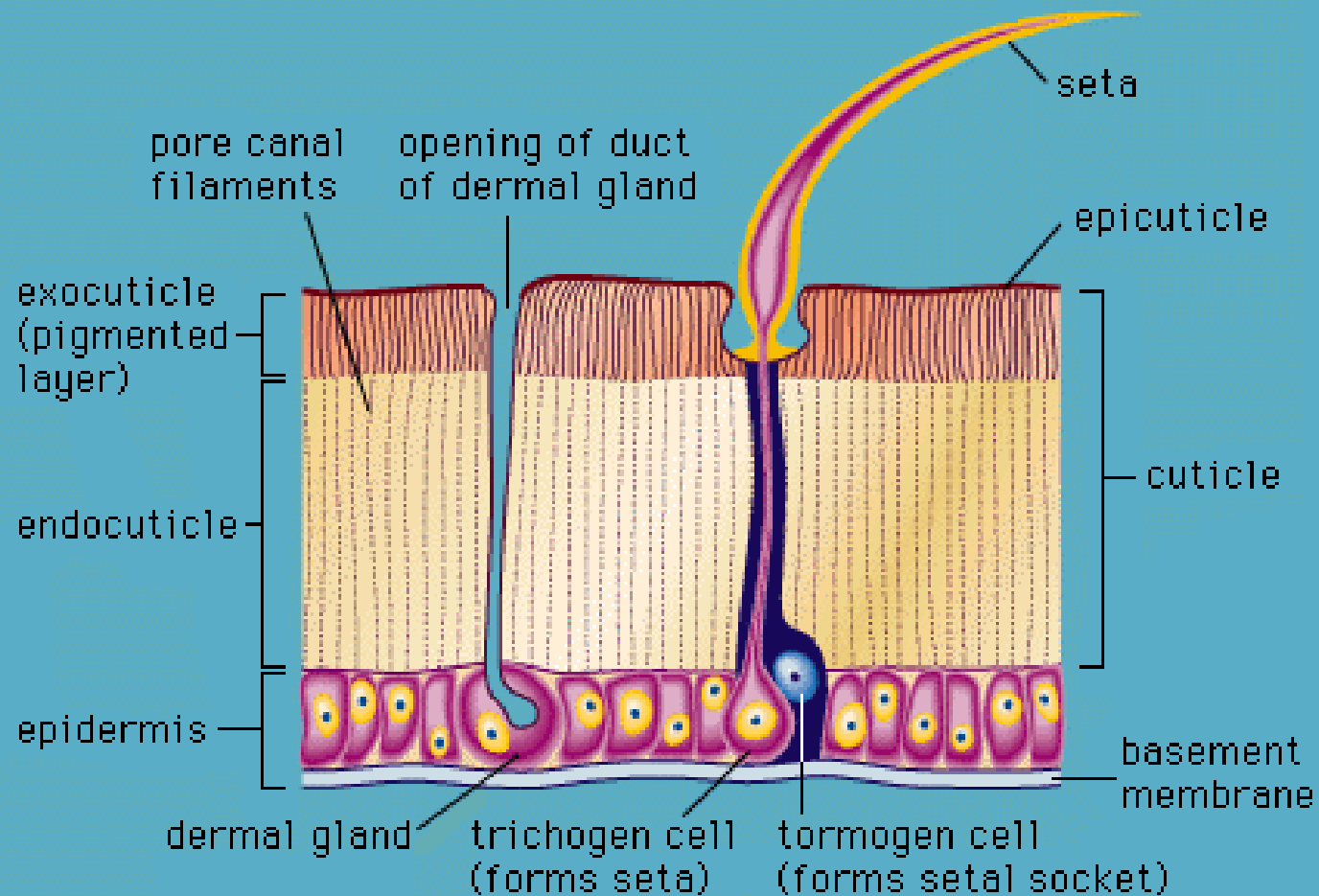


Deri Sistemi



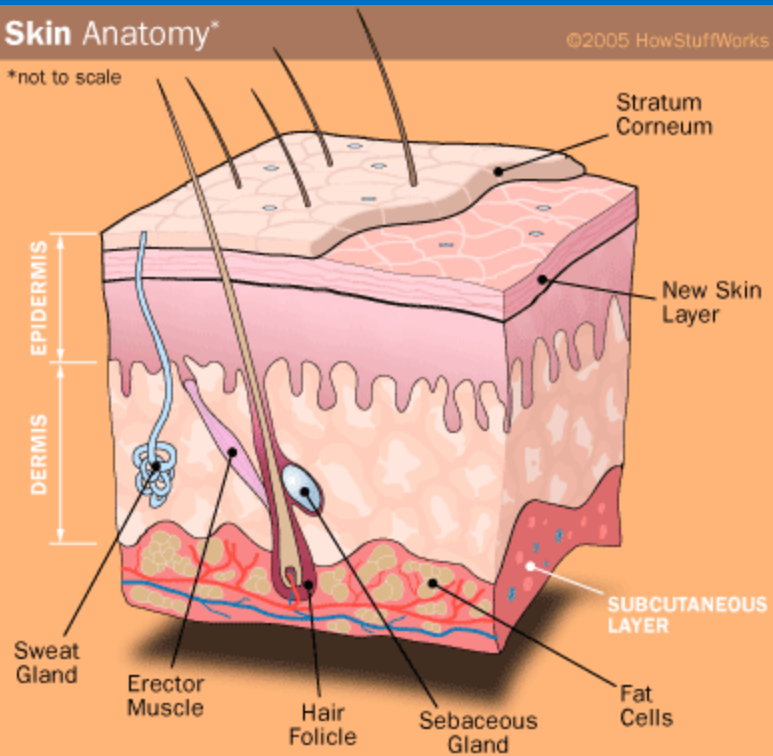
©1996 Encyclopaedia Britannica, Inc.

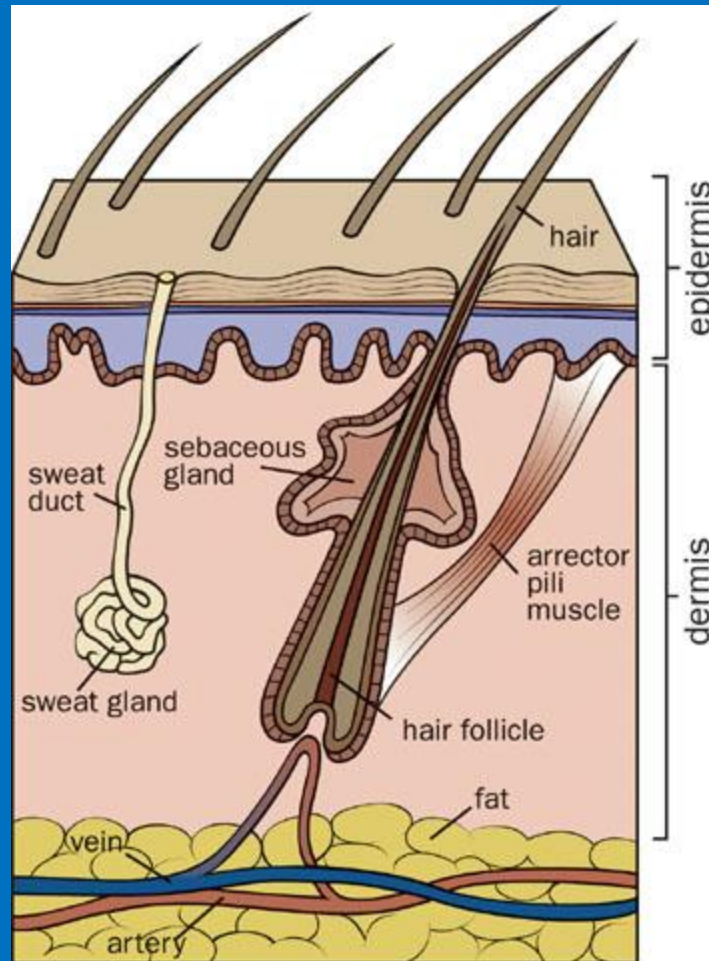
Omurgasız derisi

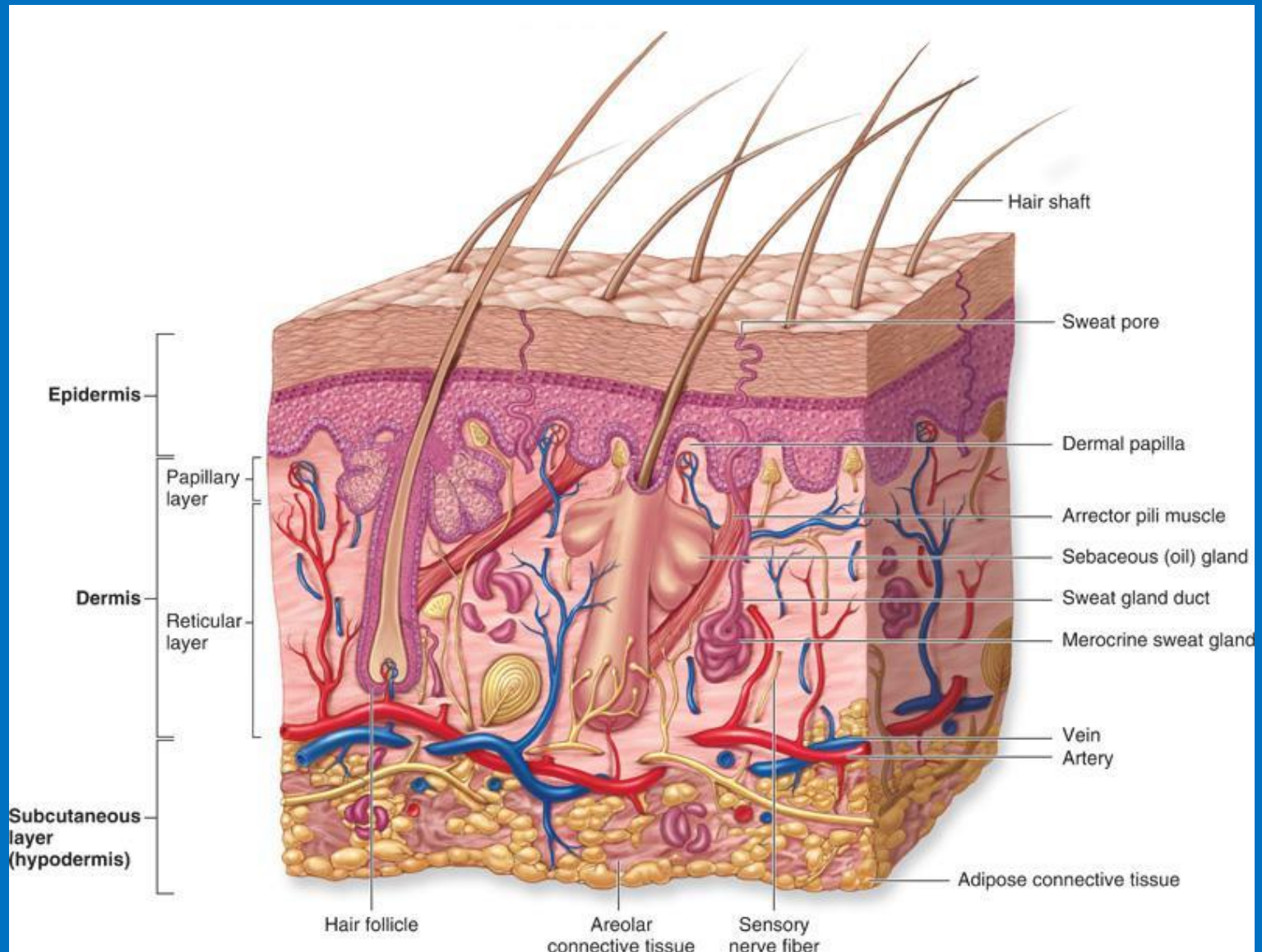
Skin Anatomy*

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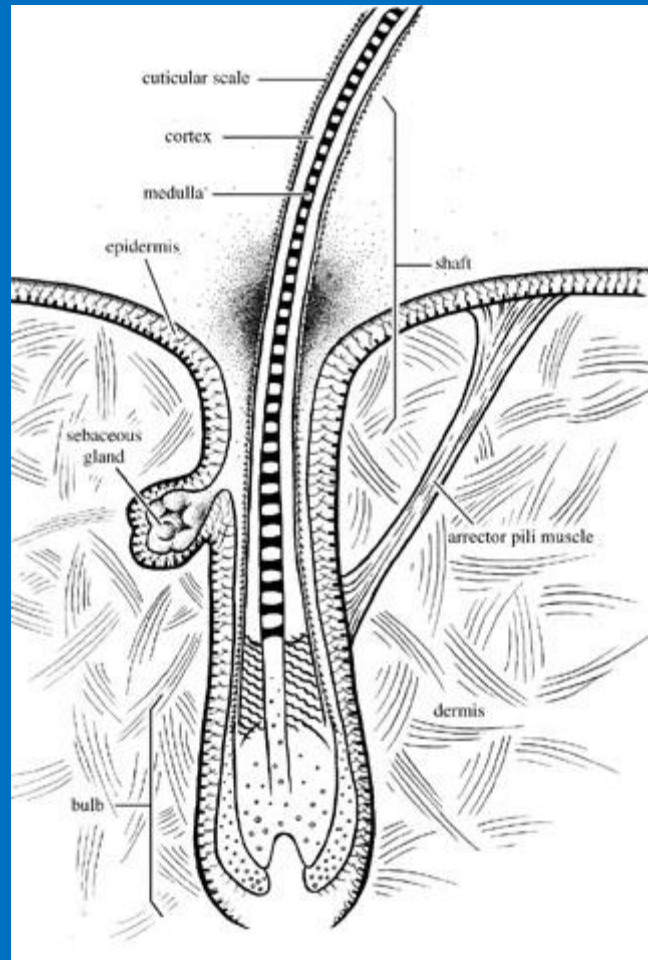
*not to scale







Kıllı Memeli derisi



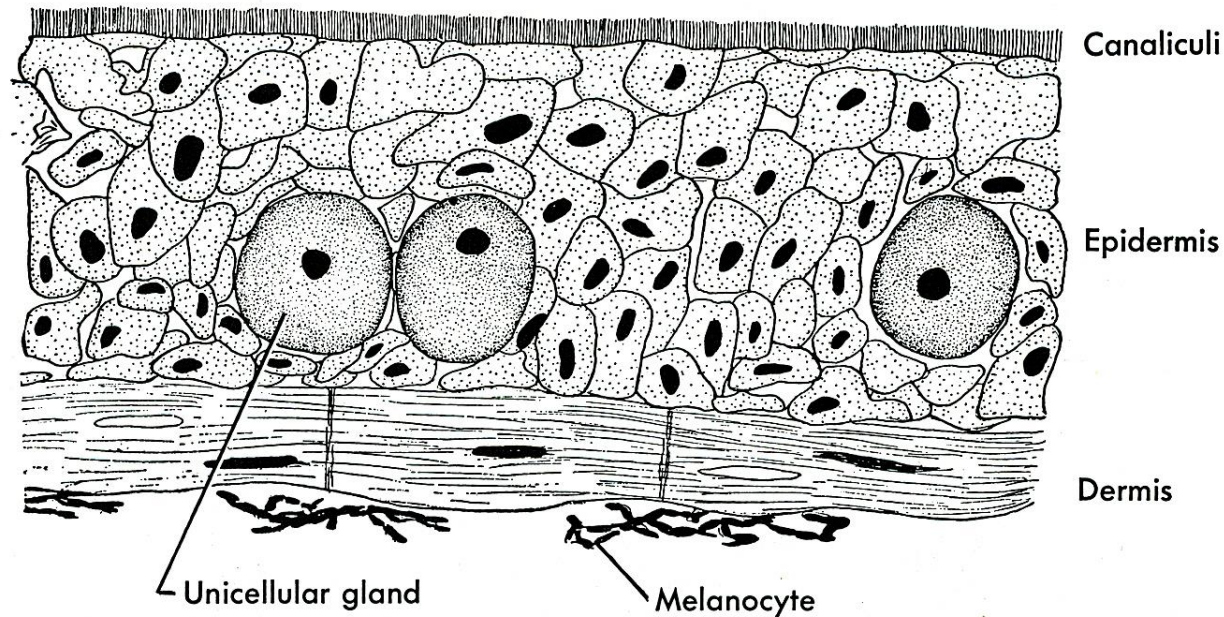
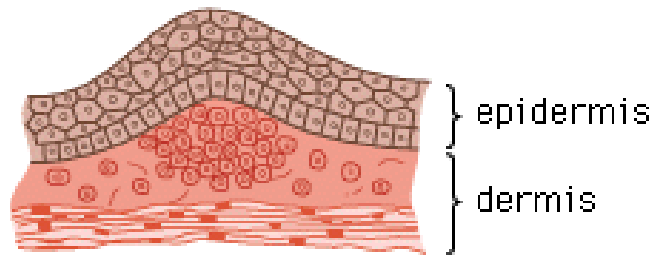
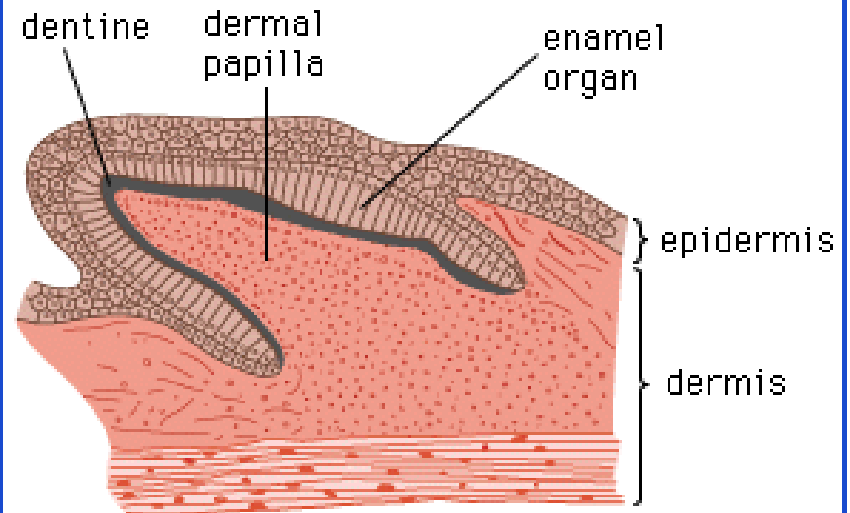


Fig. 5-11. Skin of a larval cyclostome. The striated appearance of the surface results from the presence of tiny canaliculi in the ectoplasm of the surface cells.

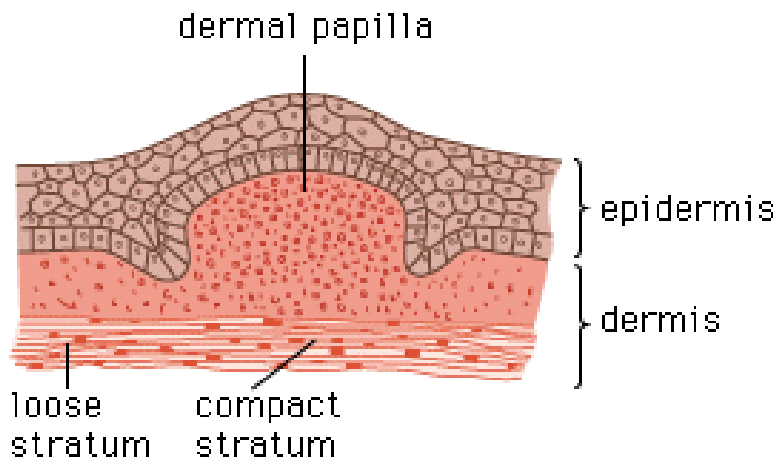
Cyclostomata larva derisi



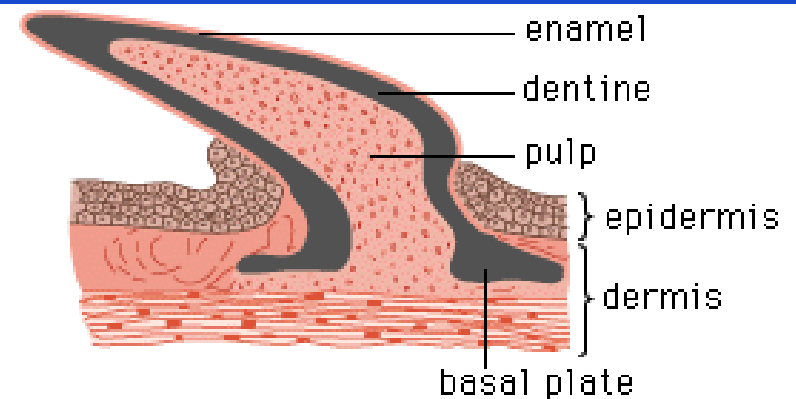
Aggregation of dermal mesenchyme cells



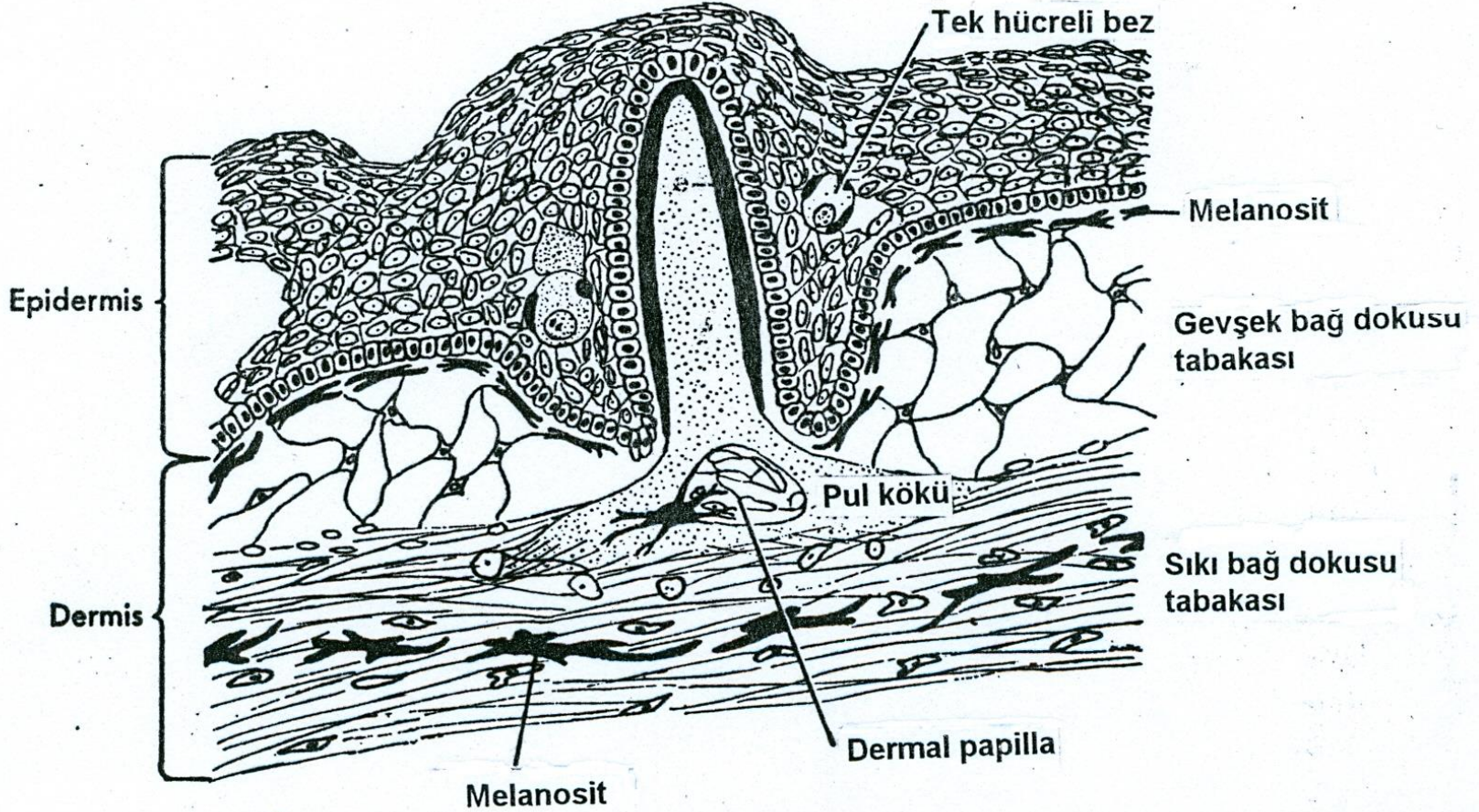
Secretion of dentine by dermal papilla



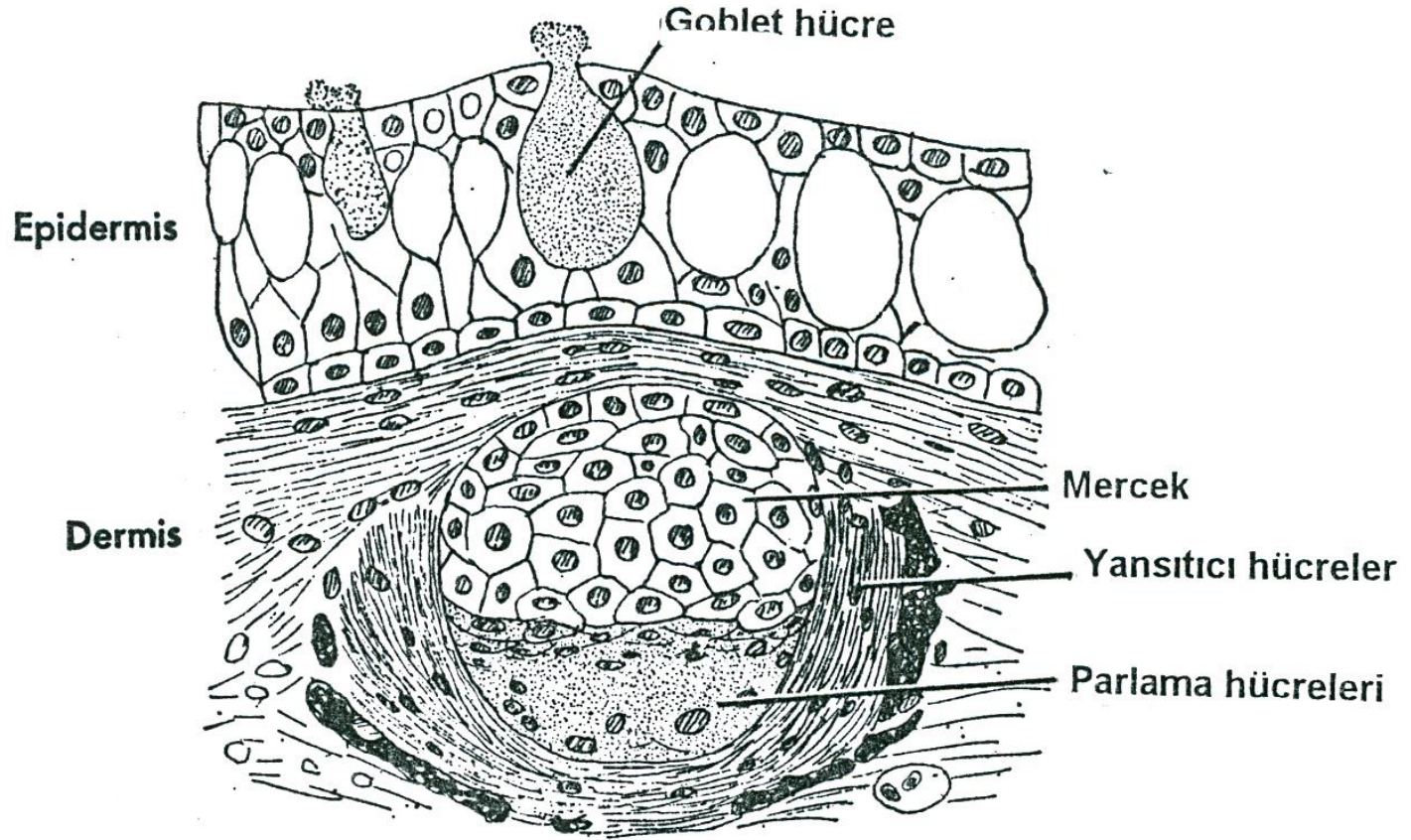
Formation of dermal papilla



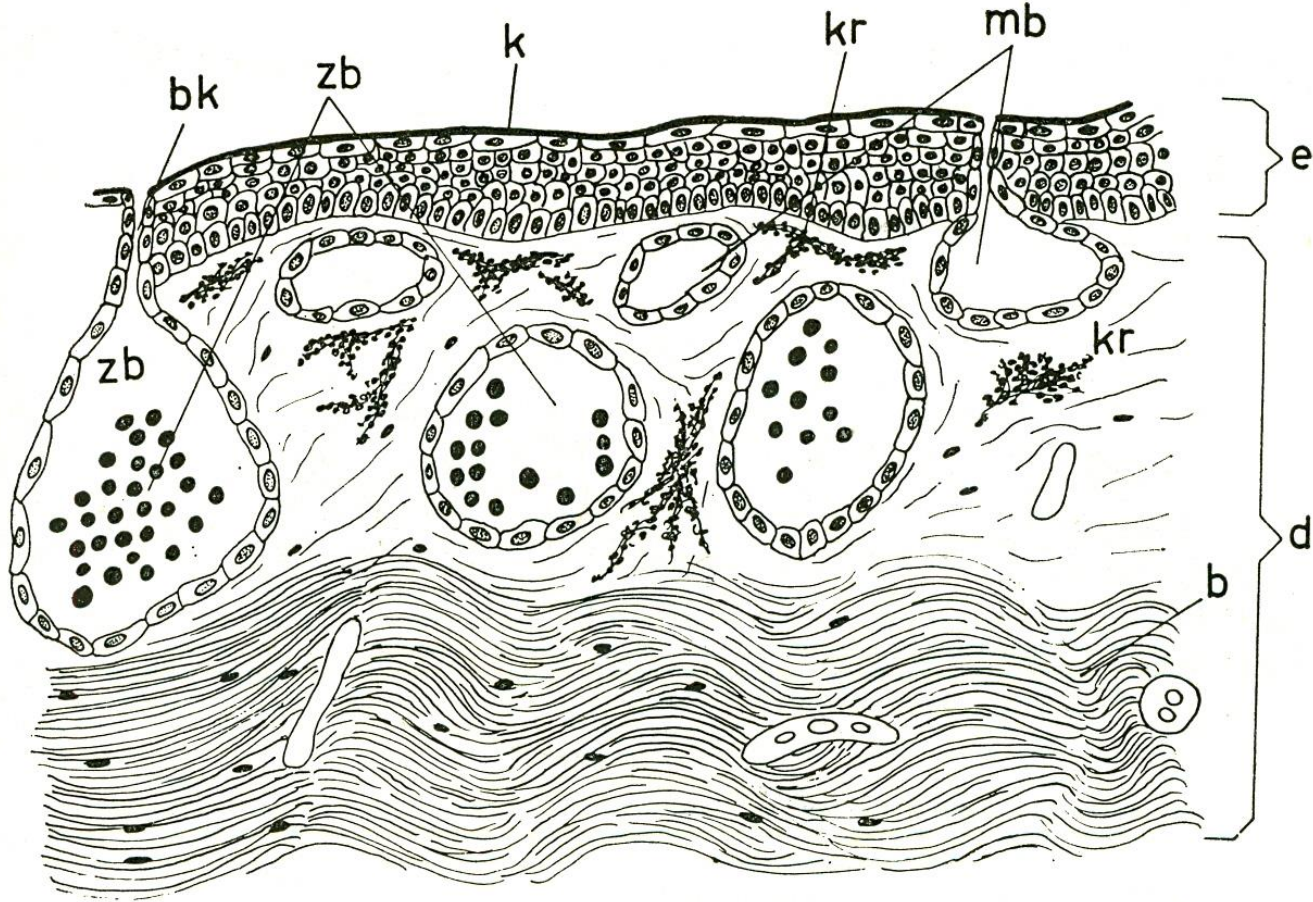
Completed scale



Şekil 4-1. Köpek balığı embriyo derisi - Gelişmekte olan plakoid pul

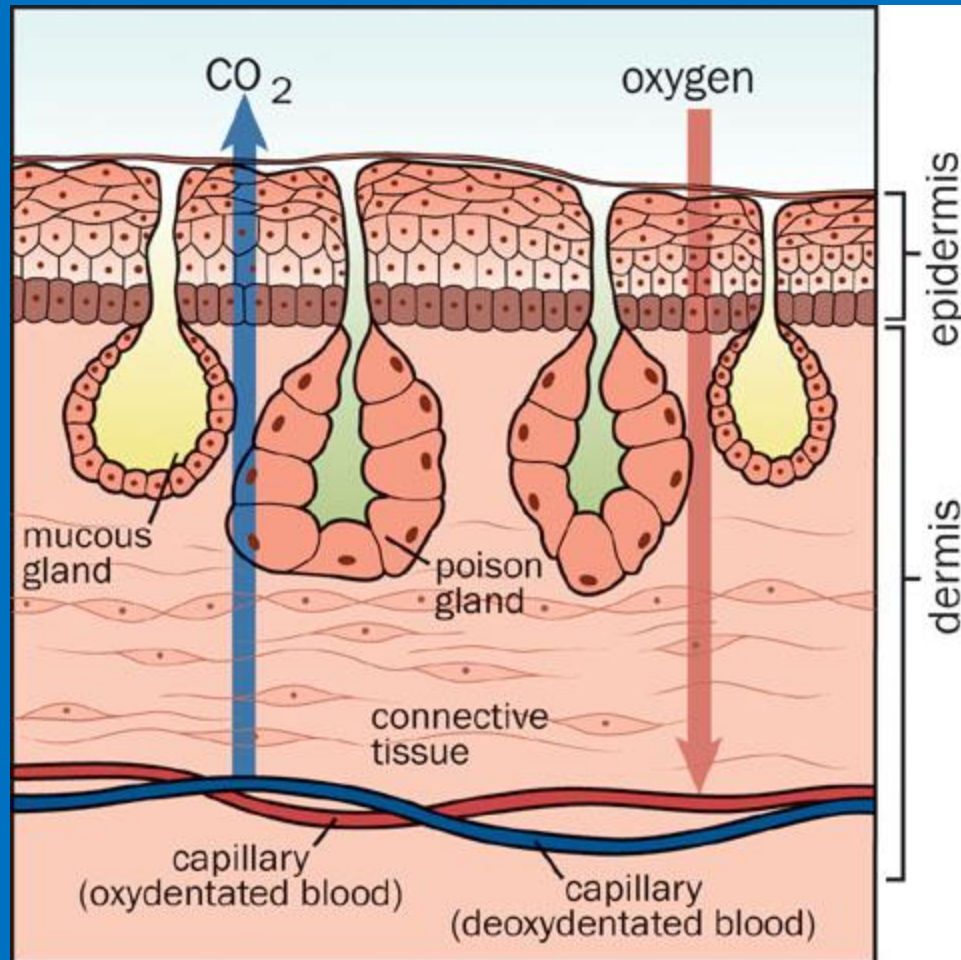


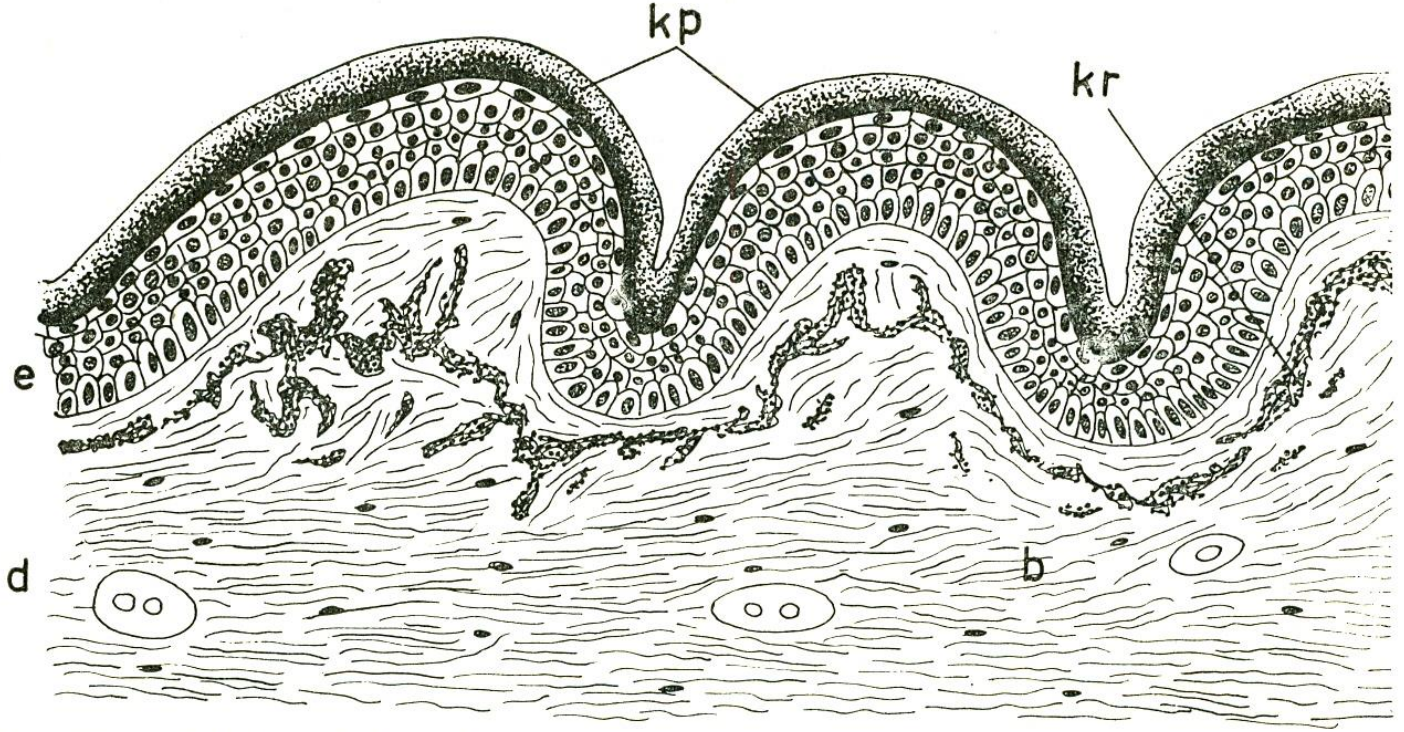
Şekil 4-4. Işık saçan balıklarda deri ve parlama organı (Fotofor)



Şekil 19 — *Rana ridibunda* (Kurbağa) derisi : b, bağ dokusu; bk, bez kanalı; d, derma; e, epiderma; k, keratinleşmiş epiderma yüzeyi; kr, kromatofor; mb, mukus bezi; zb, zehir bezi.

Amphibia derisi





Şekil 20 — Reptil derisi : b, bağ dokusu; d, derma; e, epiderma; kp, keratin pul; kr, kromatofor.

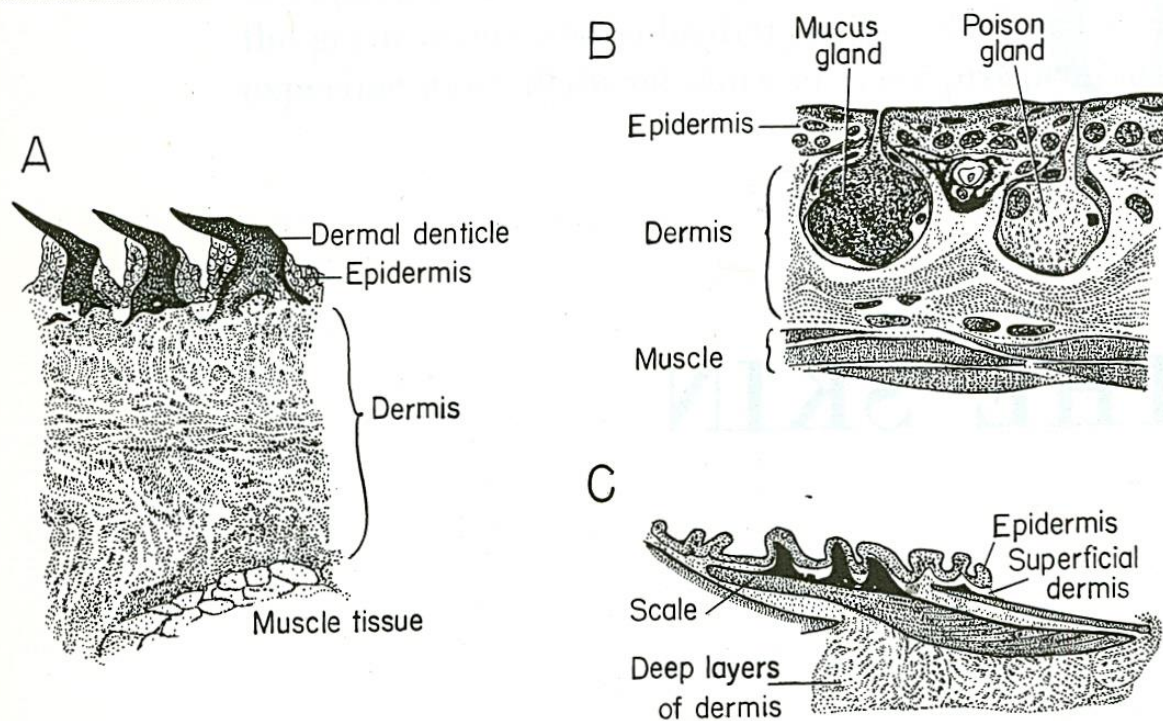


Fig. 75. Sections of the skin of *A*, a shark; *B*, a salamander; *C*, a teleost. (After Rabl.)



Epidermal pul

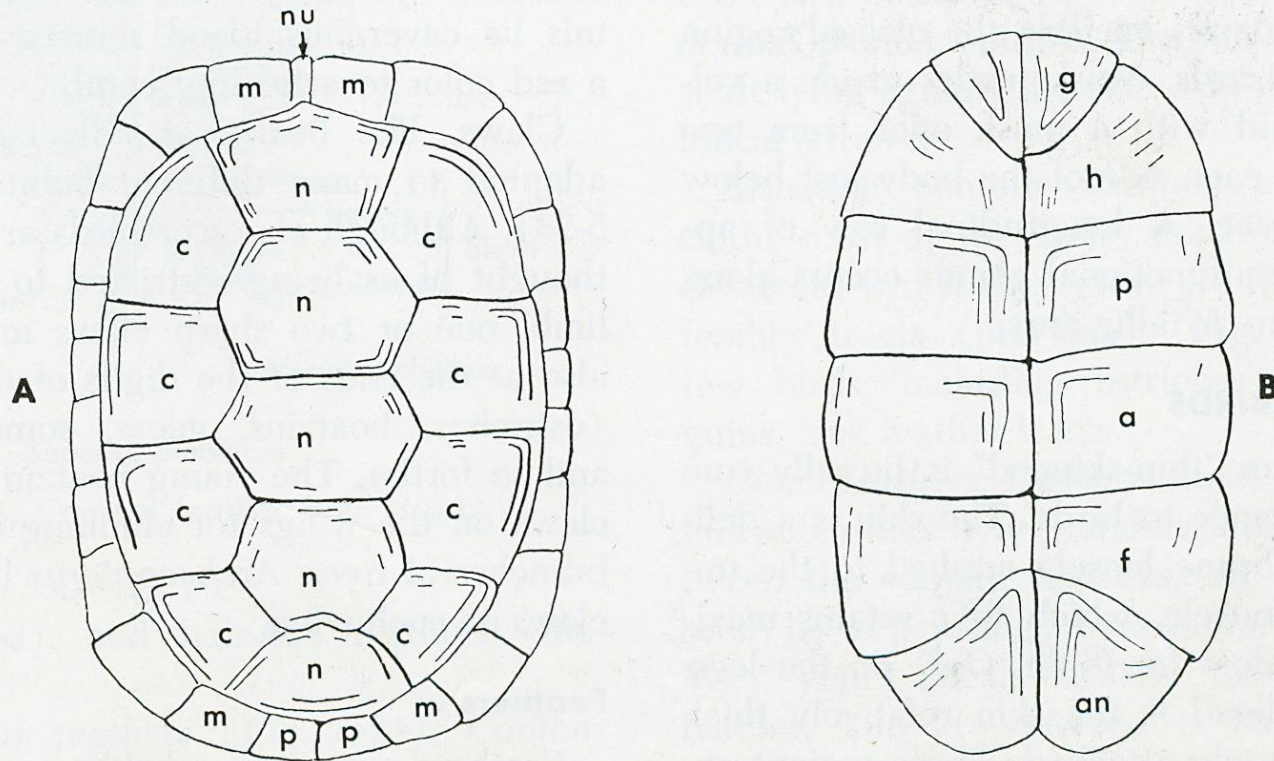
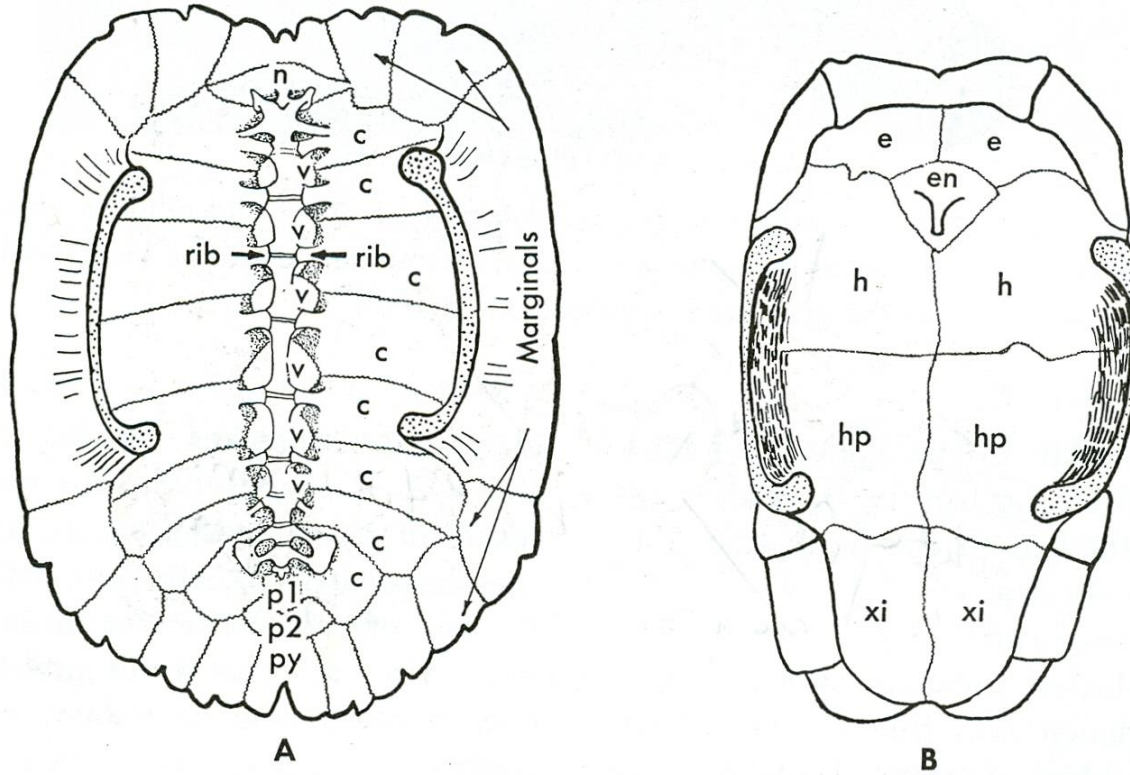


Fig. 5-21. Epidermal scutes (scales) of a turtle. Carapace, **A**, and plastron, **B**. On the carapace the scutes shown are, **c**, costals; **m**, marginals all around the periphery, including the nuchal, (**nu**), and pygals, (**p**); **n**, neurals. On the plastron the scutes shown are, **g**, gulars; **h**, humerals; **p**, pectorals; **a**, abdominals; **f**, femorals; **an**, anals.

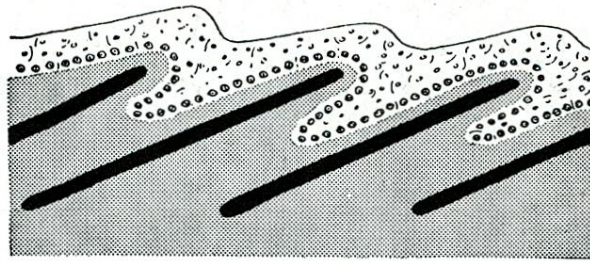
Kaplumbağa'da epidermel pullar



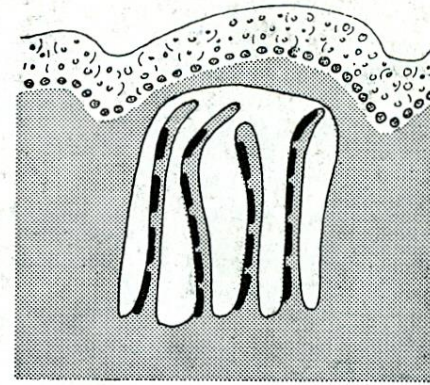
DERMAL PLATES

Fig. 5-17. Dermal plates of the carapace, **A**, and plastron, **B**, in a turtle, from an internal view. On the carapace the plates shown are, **c**, costals, united with ribs; **n**, nuchal; **p¹** and **p²**, precaudals; **v**, vertebrae (six of the eight are labeled). Marginals encircle the periphery and include the pygal, **py**. On the plastron the plates shown are, **e**, epiplastrons; **en**, entoplastron; **h**, hyoplastrons; **hp**, hypoplastrons; **xi**, xiphiplastrons.

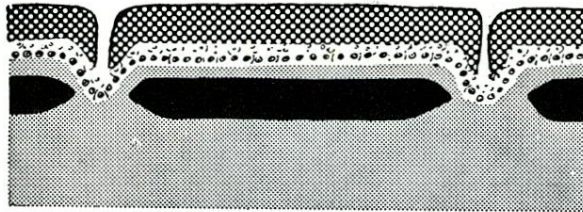
Kaplumbağa'da dermal plaklar



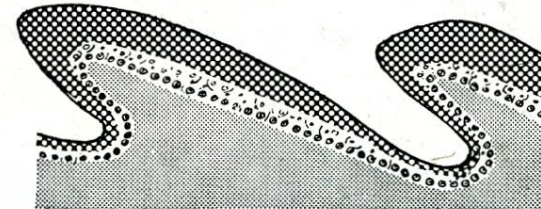
Teleost



Apoda



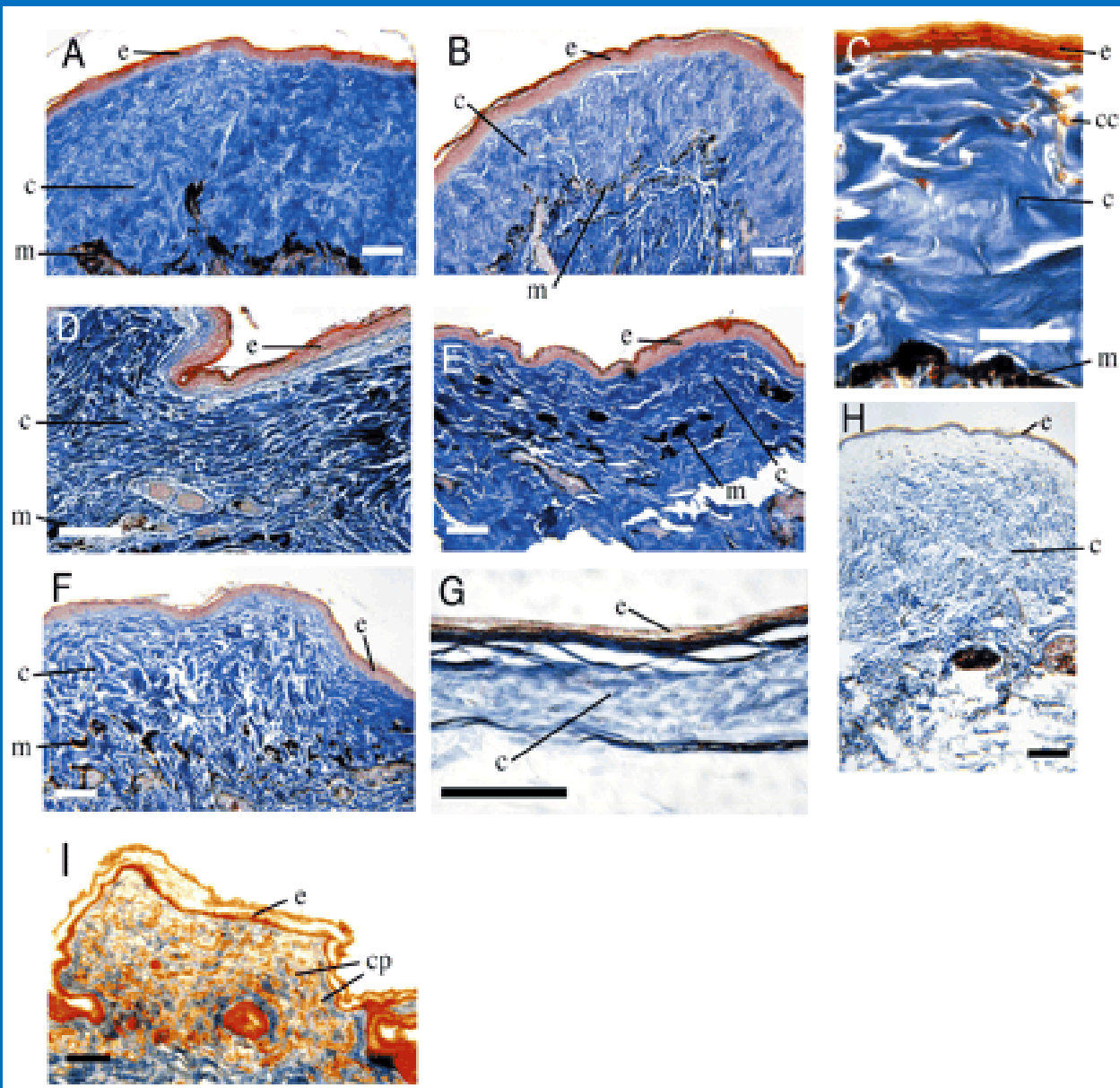
Alligator



Snake

DERMAL AND EPIDERMAL SCALES

Fig. 5-15. Dermal scales (black) in a fish, amphibian (caecilian), and alligator. Epidermal scales (black and white) in an alligator and snake. The epidermal scales are modifications of the stratum corneum. The gray area represents the dermis.



Kuş derisi



Uropygial bezler

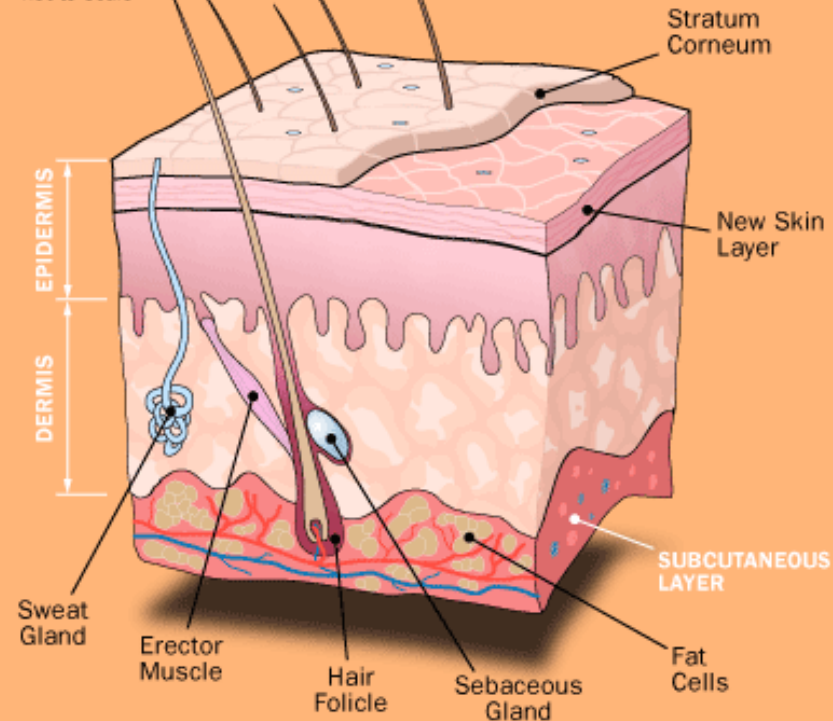




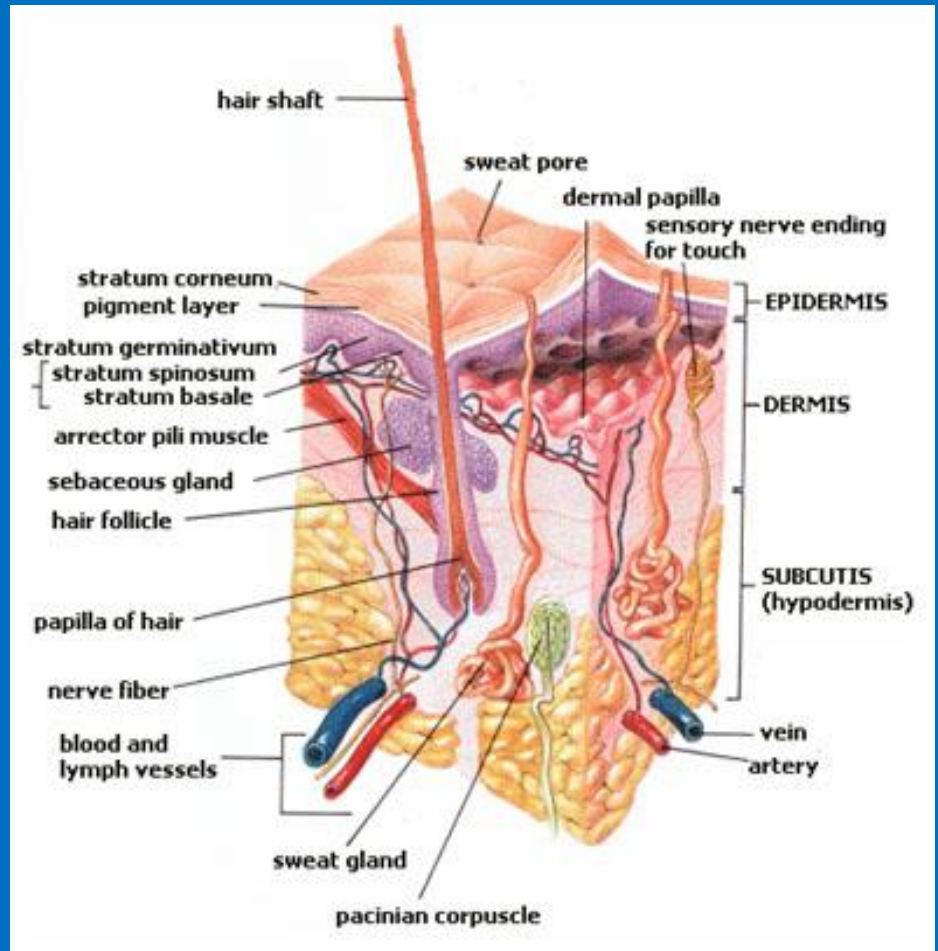
Skin Anatomy*

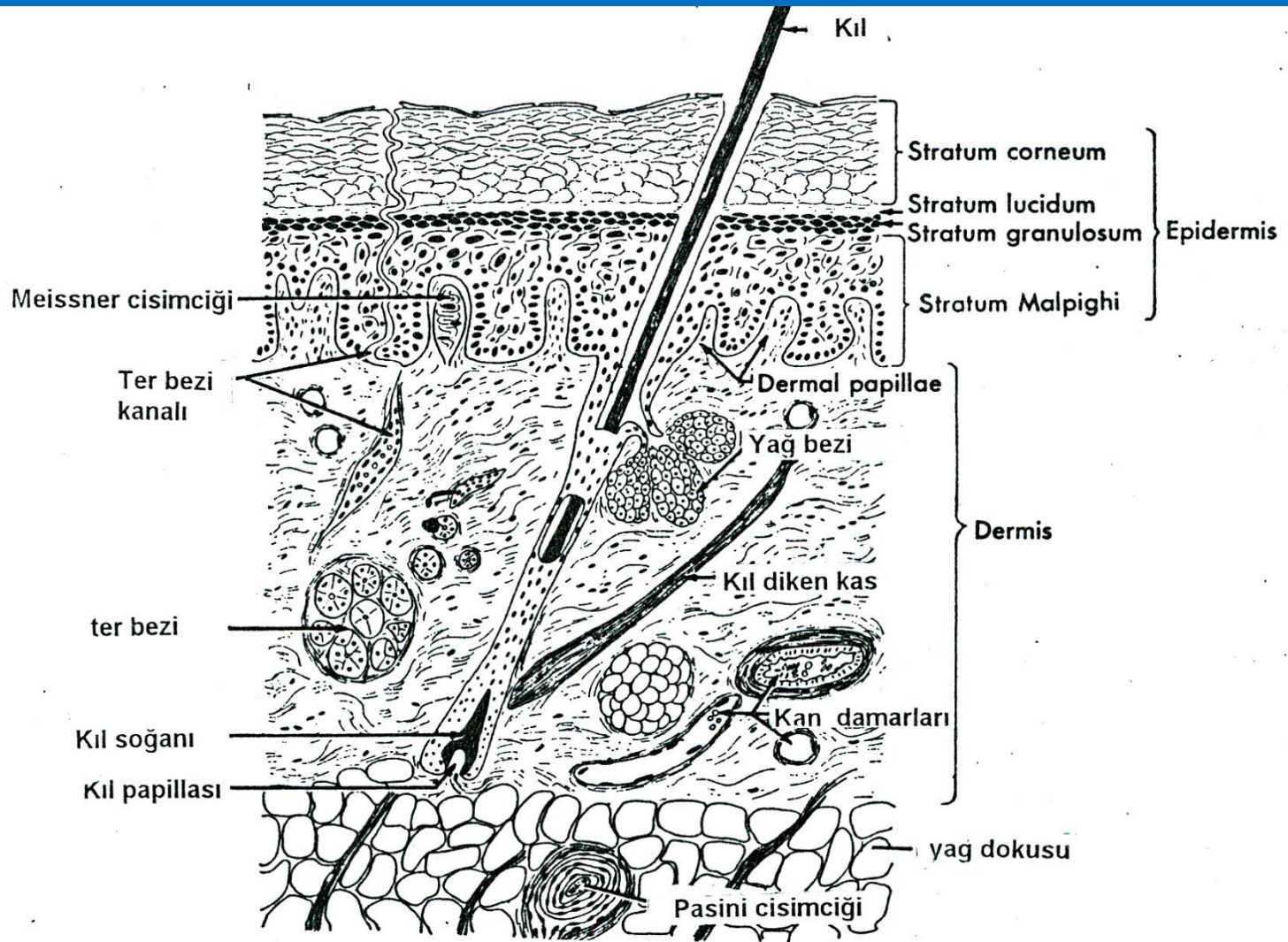
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*not to scale

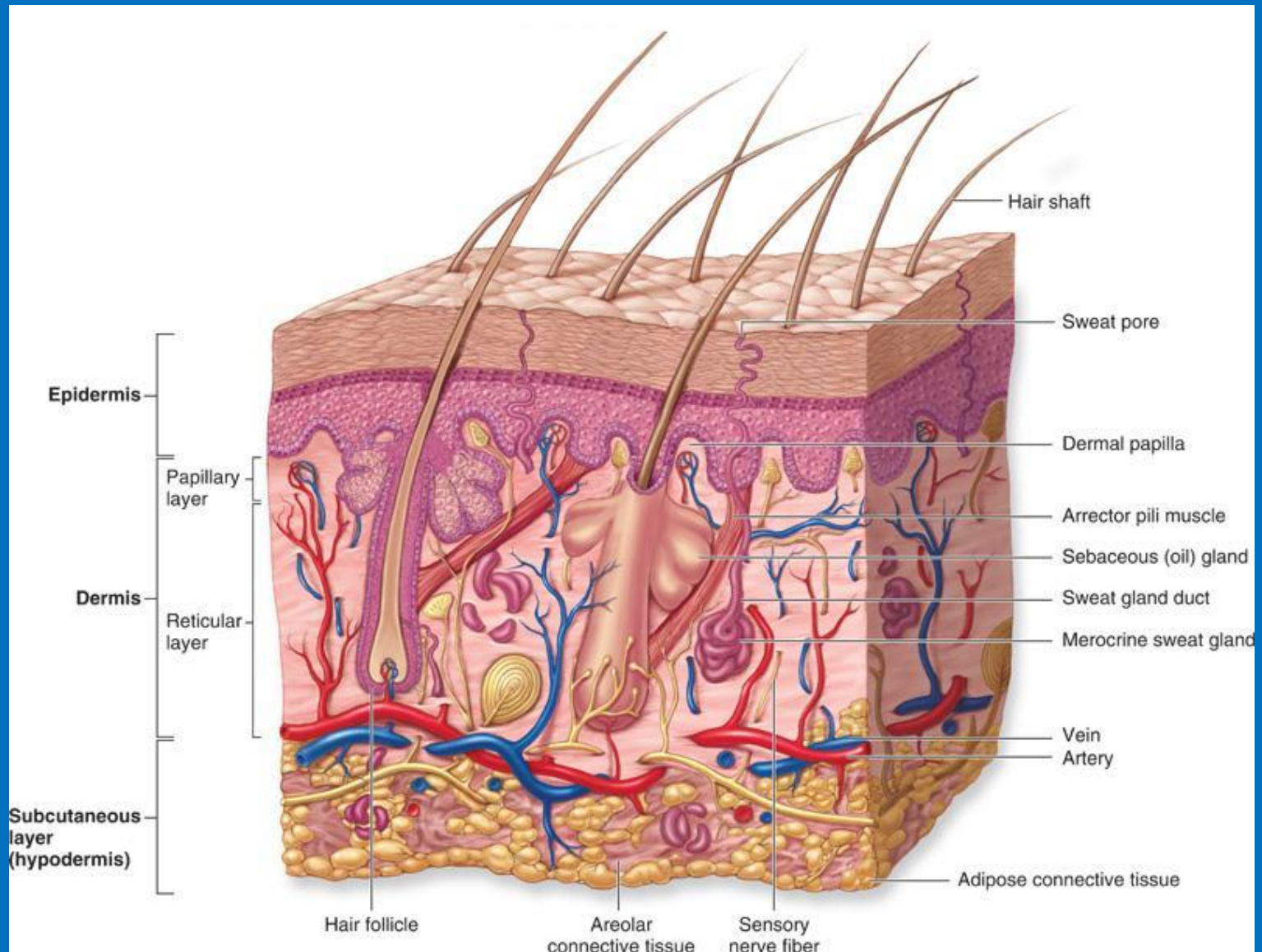


Memeli derisi





Şekil.4-3. Memeli derisi



Kıllı Memeli derisi

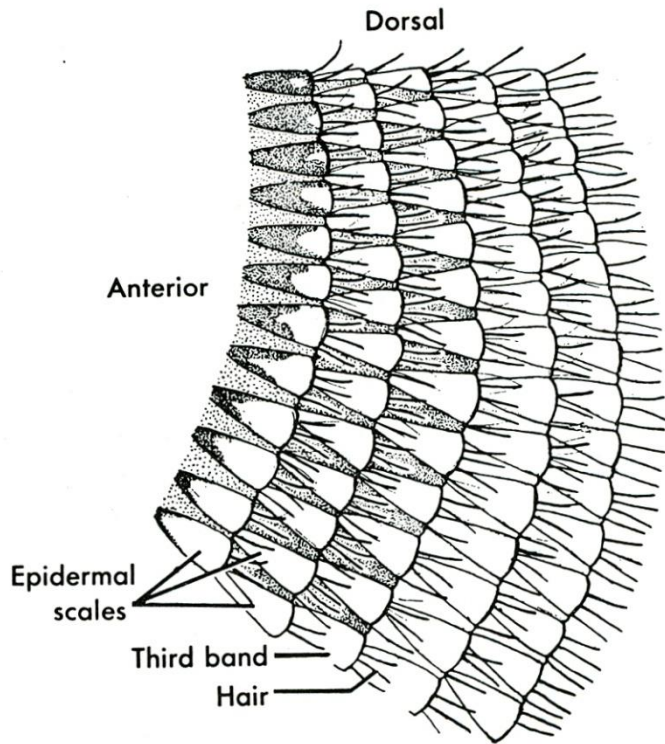


Fig. 5-33. Skin from an armadillo showing epidermal scales and hair.

Armadillo



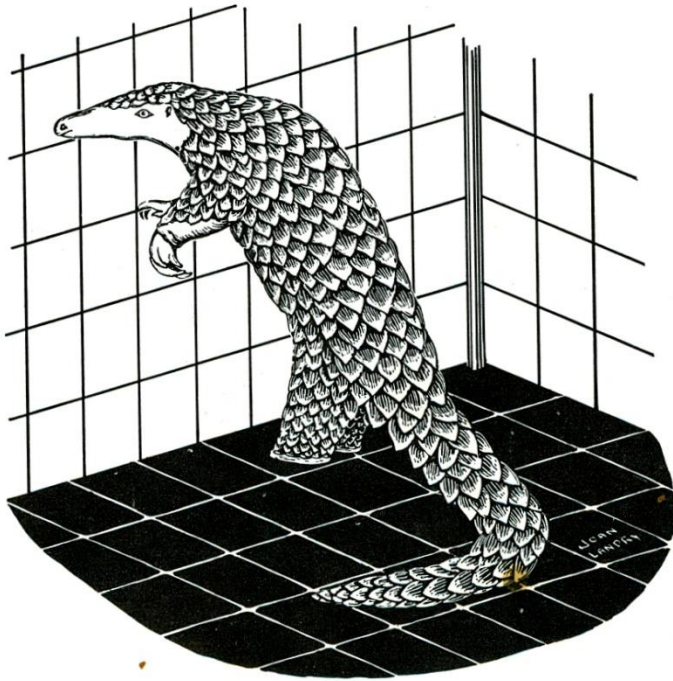


Fig. 5-34. Hair scales on a pangolin.

Manis (Pongolin)

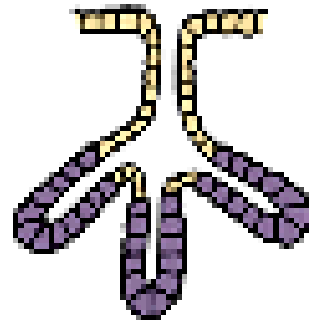


Eksokrin bez tipleri

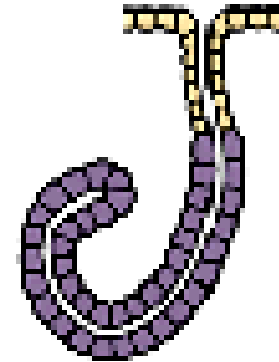
simple
types



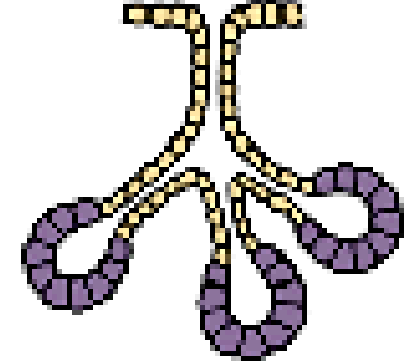
tubular



branched
tubular

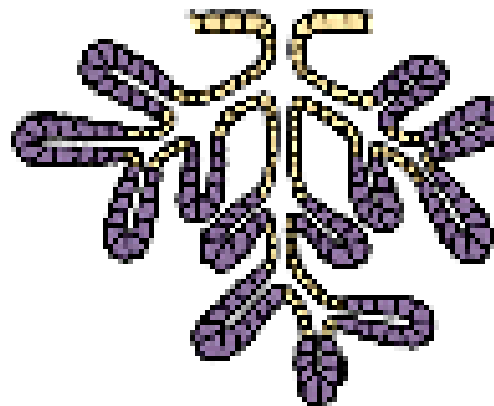


coiled
tubular

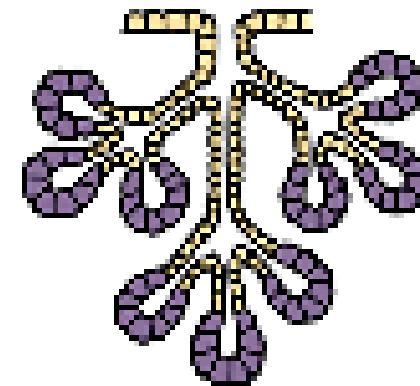


branched
alveolar

compound
types

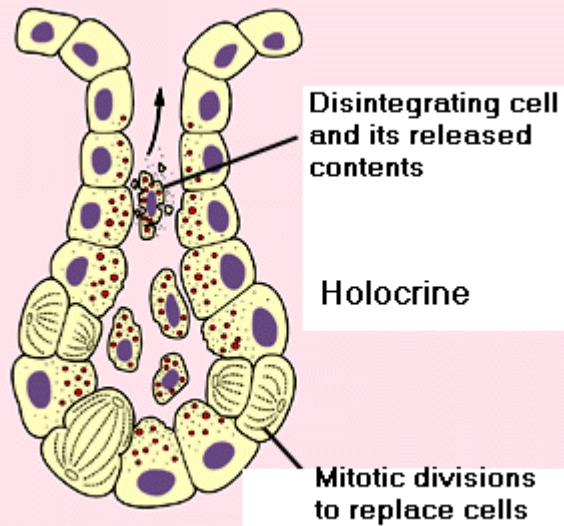


tubular

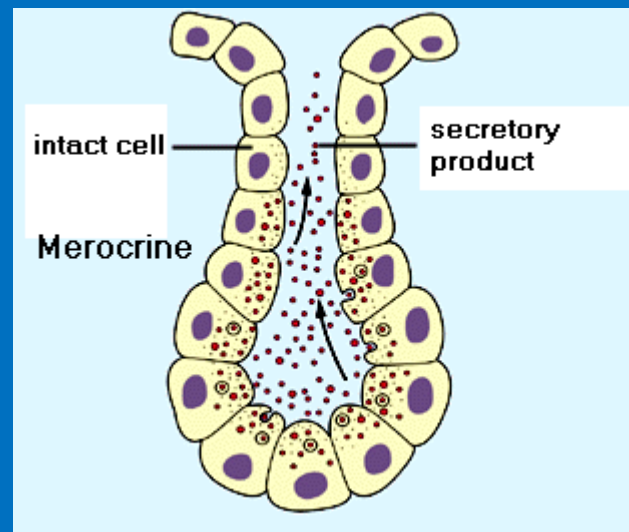
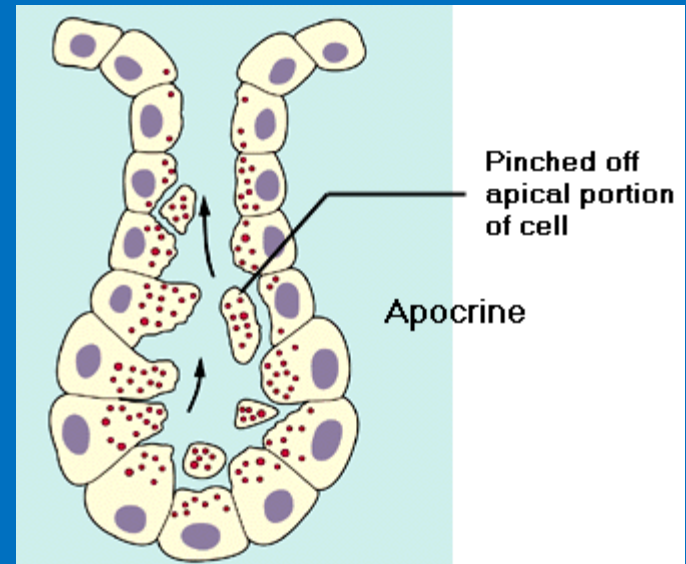


alveolar

Holokrin bez



Apokrin bez



Merokrin bez



Epidermal pullar





BIRD SCALES
-feet and legs





Epidermal pul



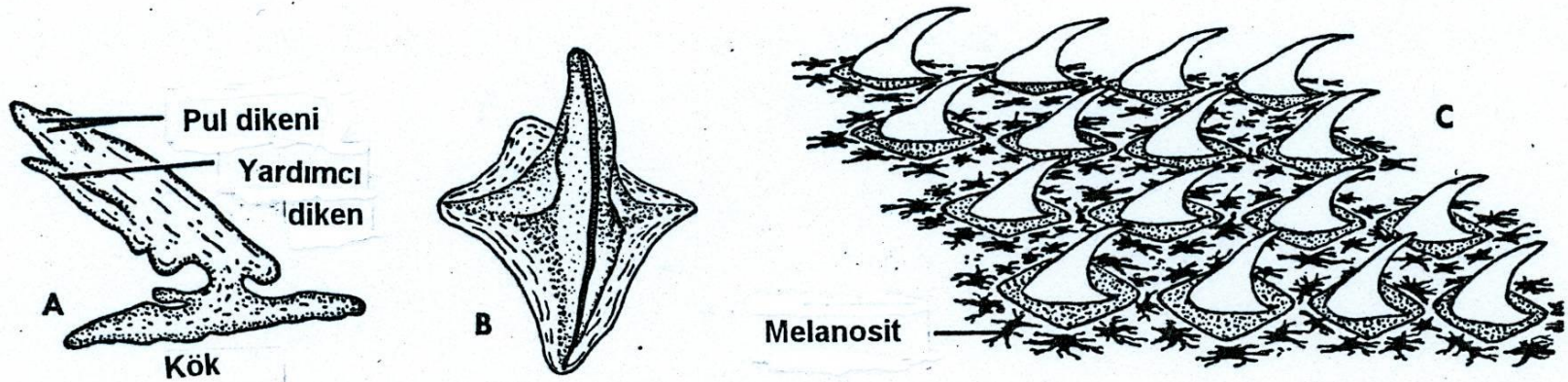


Epidermal pullar



Dermal Pullar :

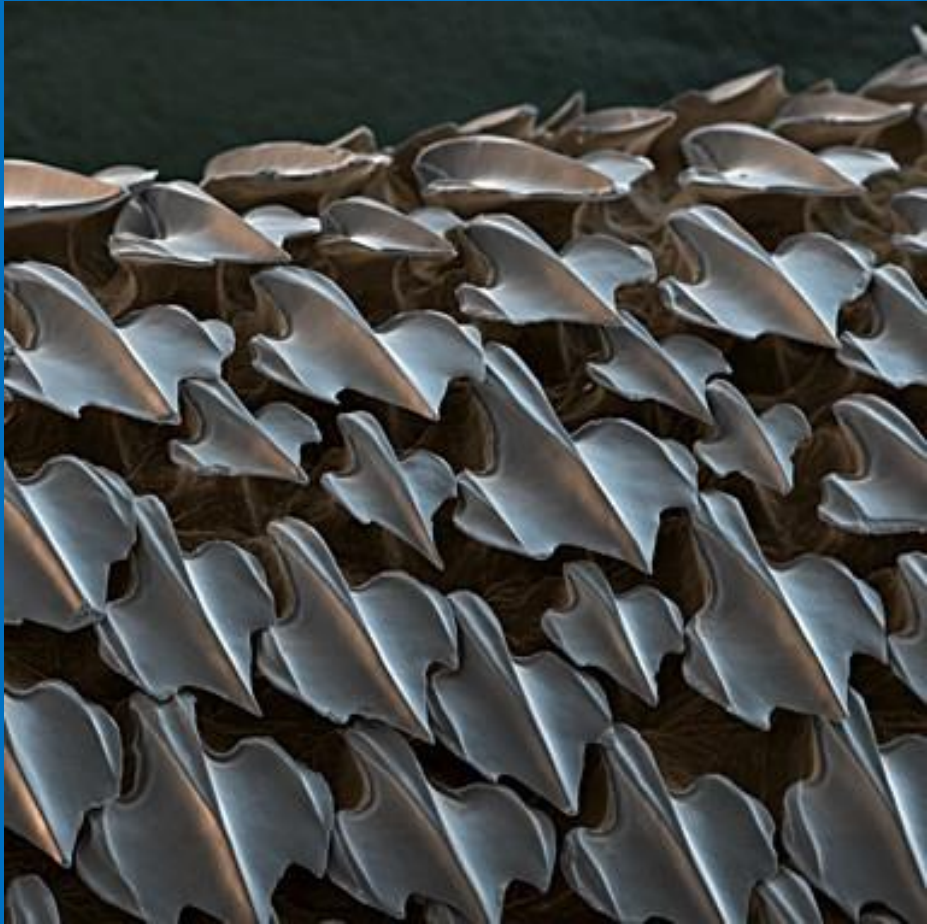
a. Placoid pullar



Şekil 4-6. Plakoid pul (köpek balığı). A ve B iki farklı tipte plakoid pul.

C. Dermiste basal levhanın uzantıları halinde plakoid pul spinleri.

Placoid pullar



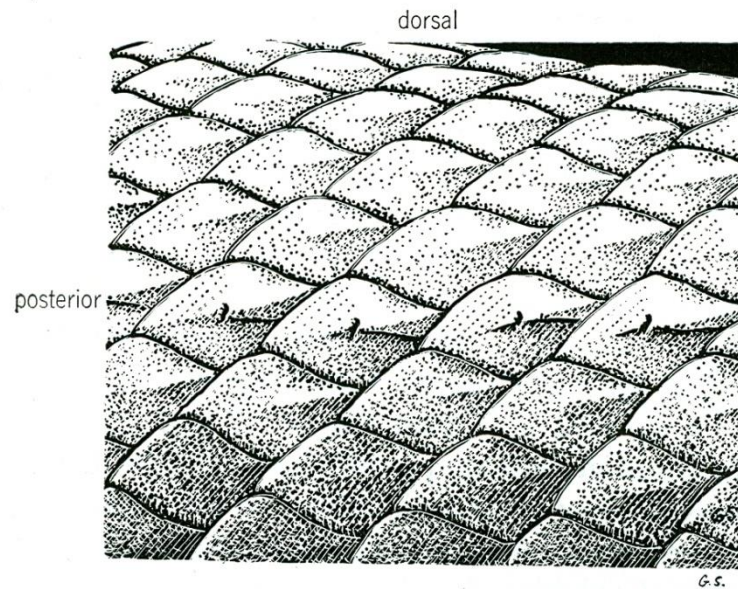
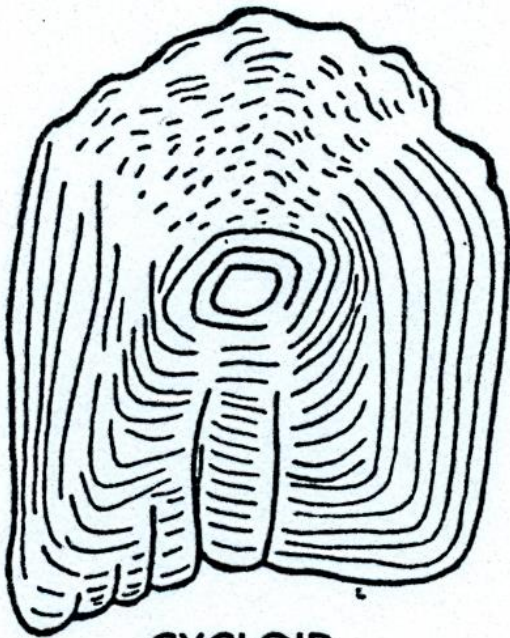


FIG. 4.10. Ganoid scales of the gar, *Lepisosteus*. Note perforations for openings of the lateral-line canal. (Drawn by G. Schwenk.)

b. Ganoid pullar



c. Cycloid ve Ctenoid pullar



CYCLOID

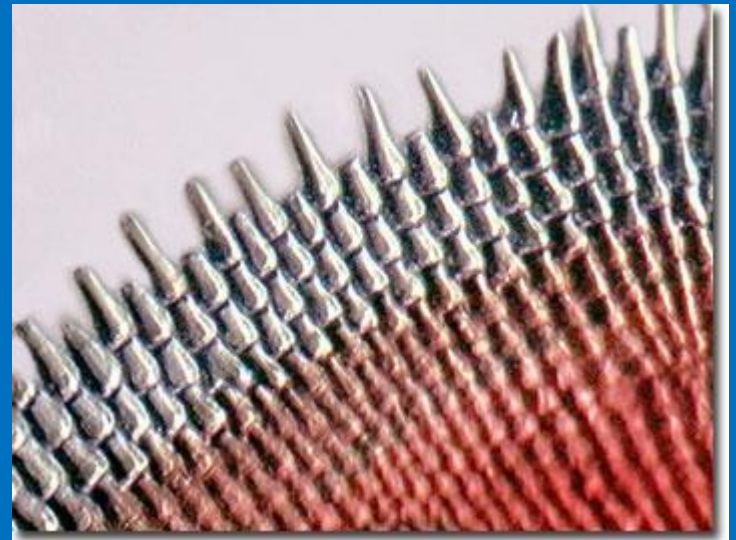
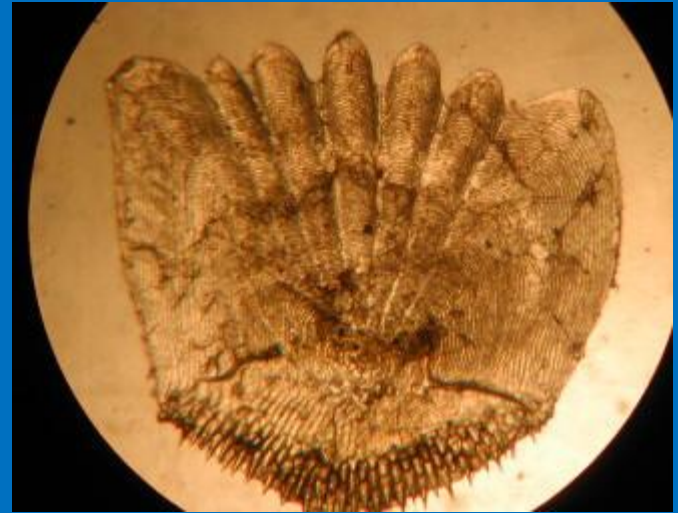


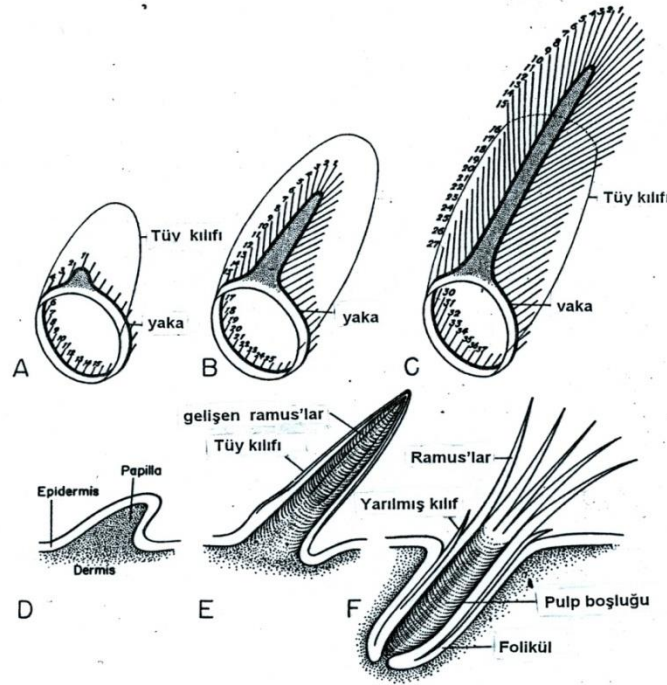
CTENOID

Cycloid pullar



Ctenoid pullar





Şekil 4-9. Tüy gelişmesi. D.E.F. Ayva tüyünün gelişim evrelerinin şematik gösterimi.

Gelişim mezodermal papilla şeklinde başlar. Daha sonra bu yapı folikülün içine doğru çöker. Ektodermin en dış tabakası tüy kınını oluşturmak üzere ayrılır. Ektodermin geri kalan kısmı bazalde kıl sapını yapmak üzere bir oyuk oluşturur. Daha sonra da distalde bu yapı çok sayıda birbirine paralel kolonlara bölünür. Tüyün yarılması ile bu paralel kolonlar ramusları oluşturmak üzere serbest kalırlar. A.B.C : Kontur tüylerin dökülenin yerine yenilerin çıkması ile ilgili gelişimin şematik gösterimi. Temelde model hav tüyünün gelişimi ile benzerdir. Tüy büyümesi basalde ektodermal yaka oluşması ile başlar (c). Bu yakadan daha sonra tıpkı hav tüyünde olduğu gibi tüy içindeki paralel kolonlar gelişir (s). Yukarıya doğru güçlü büyümelerden biri (içi nokta nokta gösterilmiş olan) tüy gövdesini oluşturur. Paralel kolonlar daha sonra (numaralarla gösterilmiş) bu gövde üzerine göç ederek ramusları oluştururlar.

Kontur tüy gelişimi

Plume – Kontur tüyler

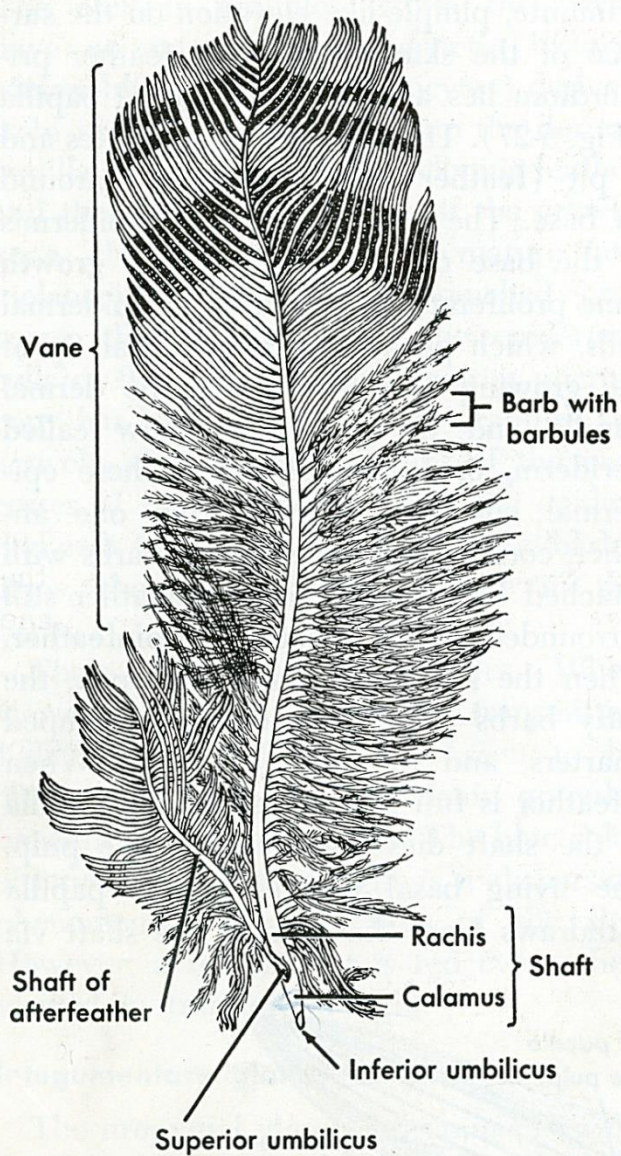
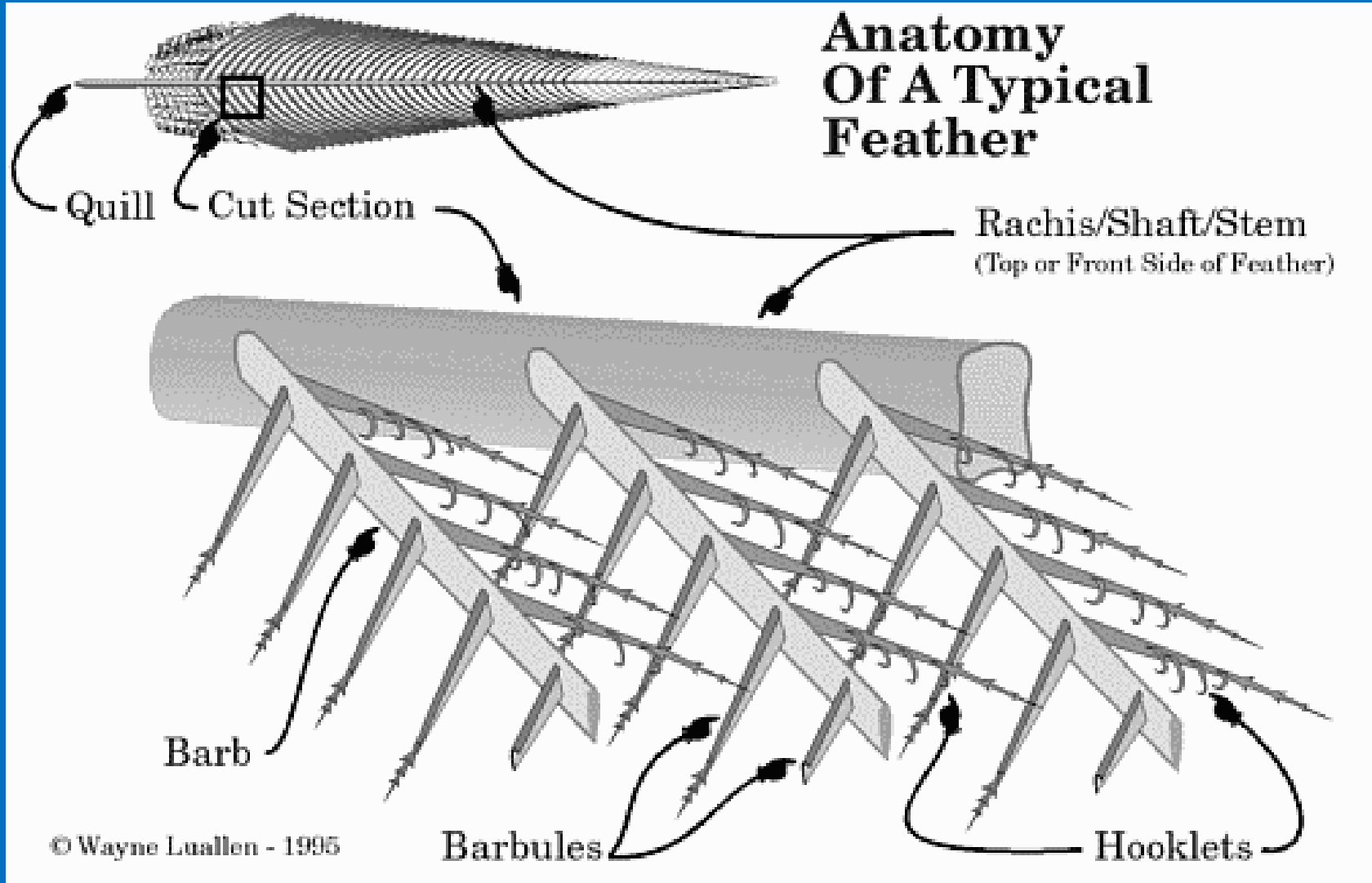


Fig. 5-24. Contour feather from a grouse.



Tipik bir tüyün anatomik yapısı



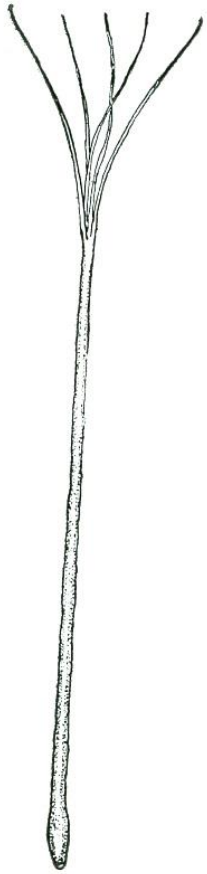


FIG. 4.17. A hair feather.

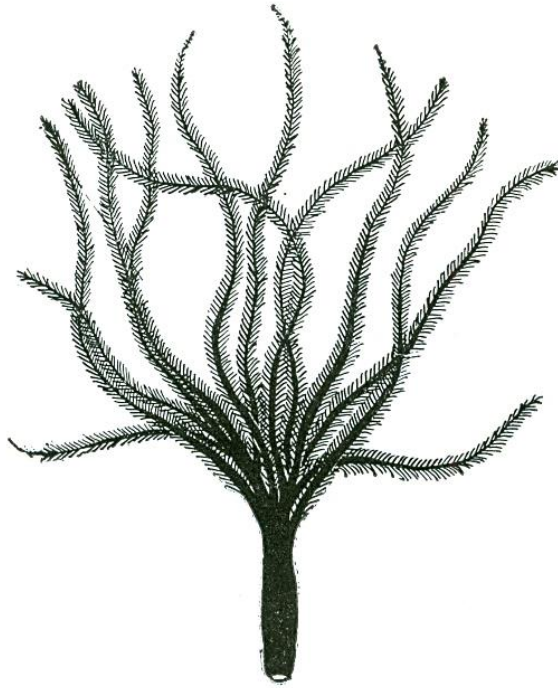


FIG. 4.18. A down feather.

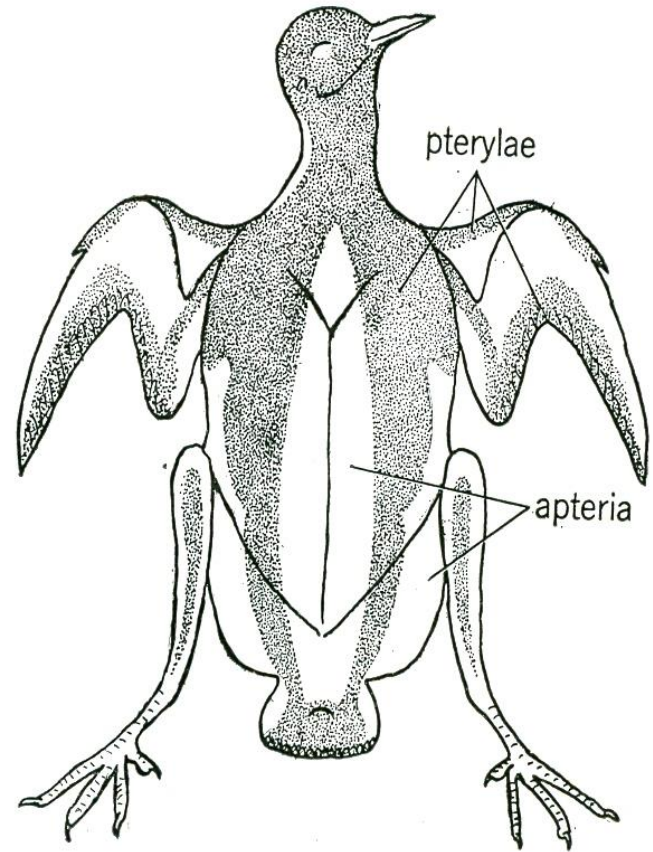


FIG. 4.19. Distribution of feather tracts in the pigeon. (After Nitsch.)



Plumule – Hav tüyleri

Somateria mollissima

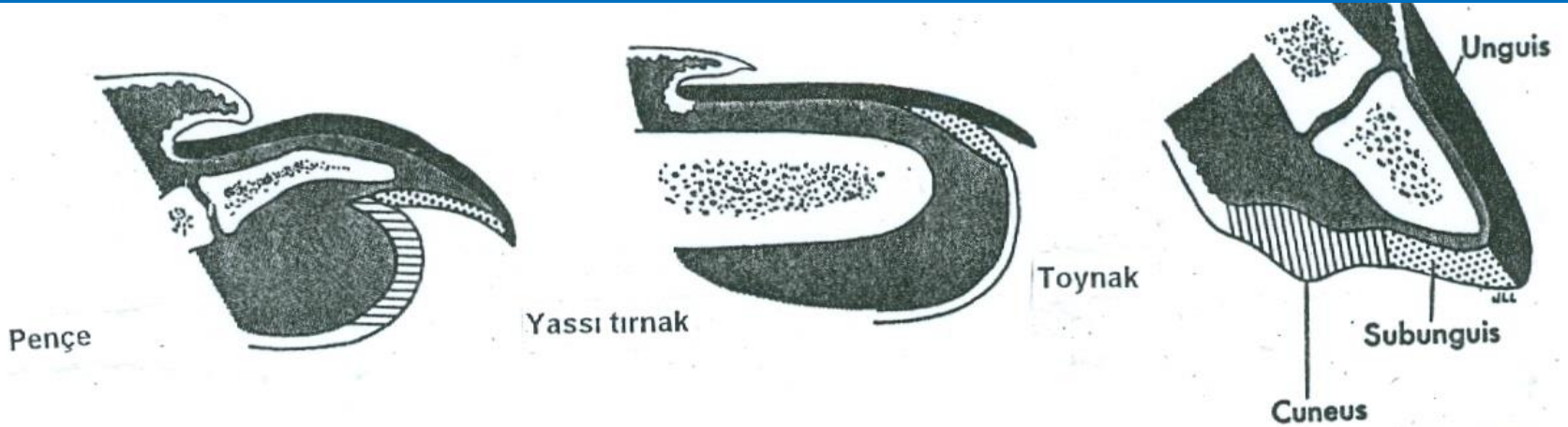


Piloplume – Ayva tüyleri

Filoplume Feather

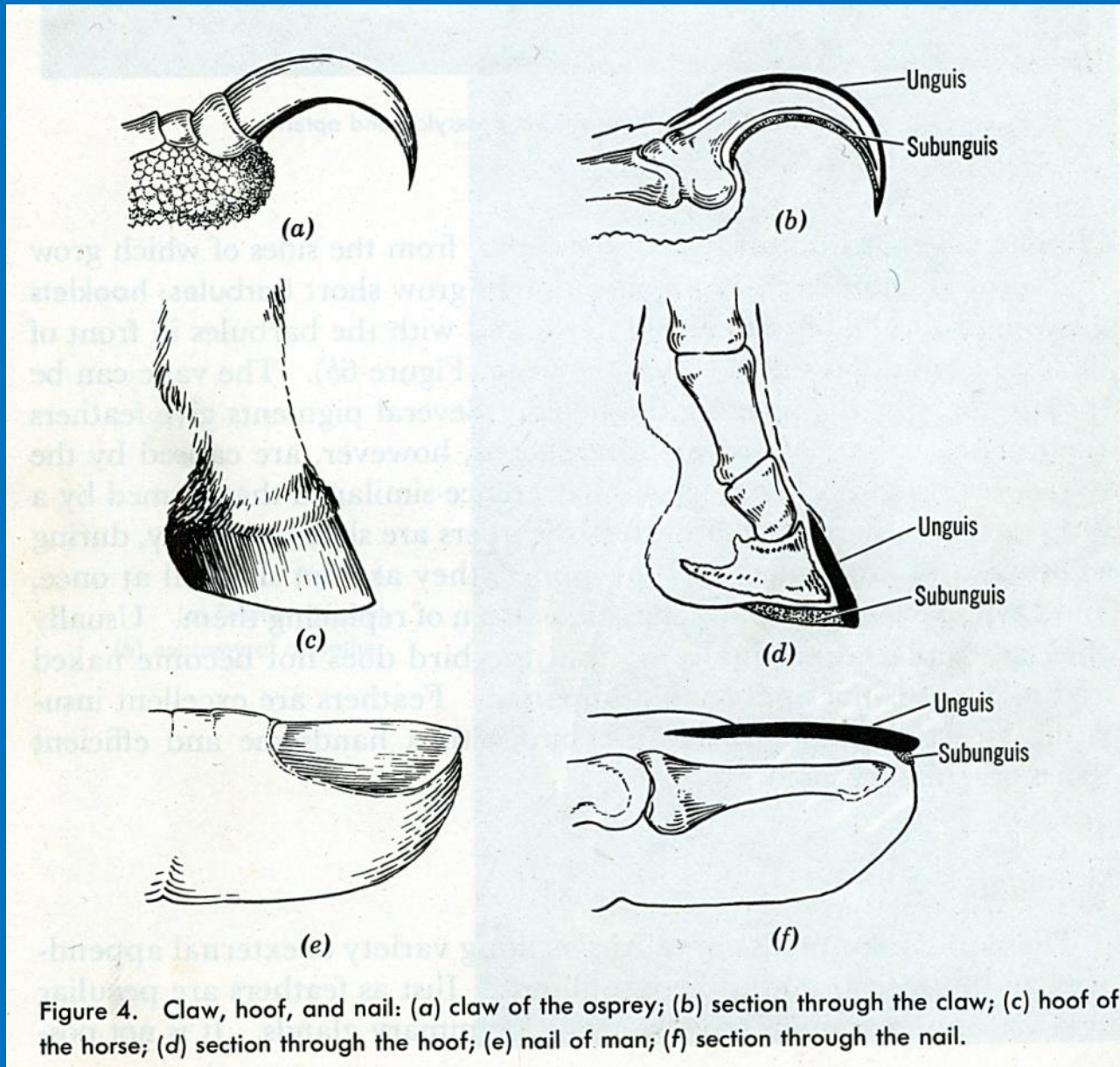


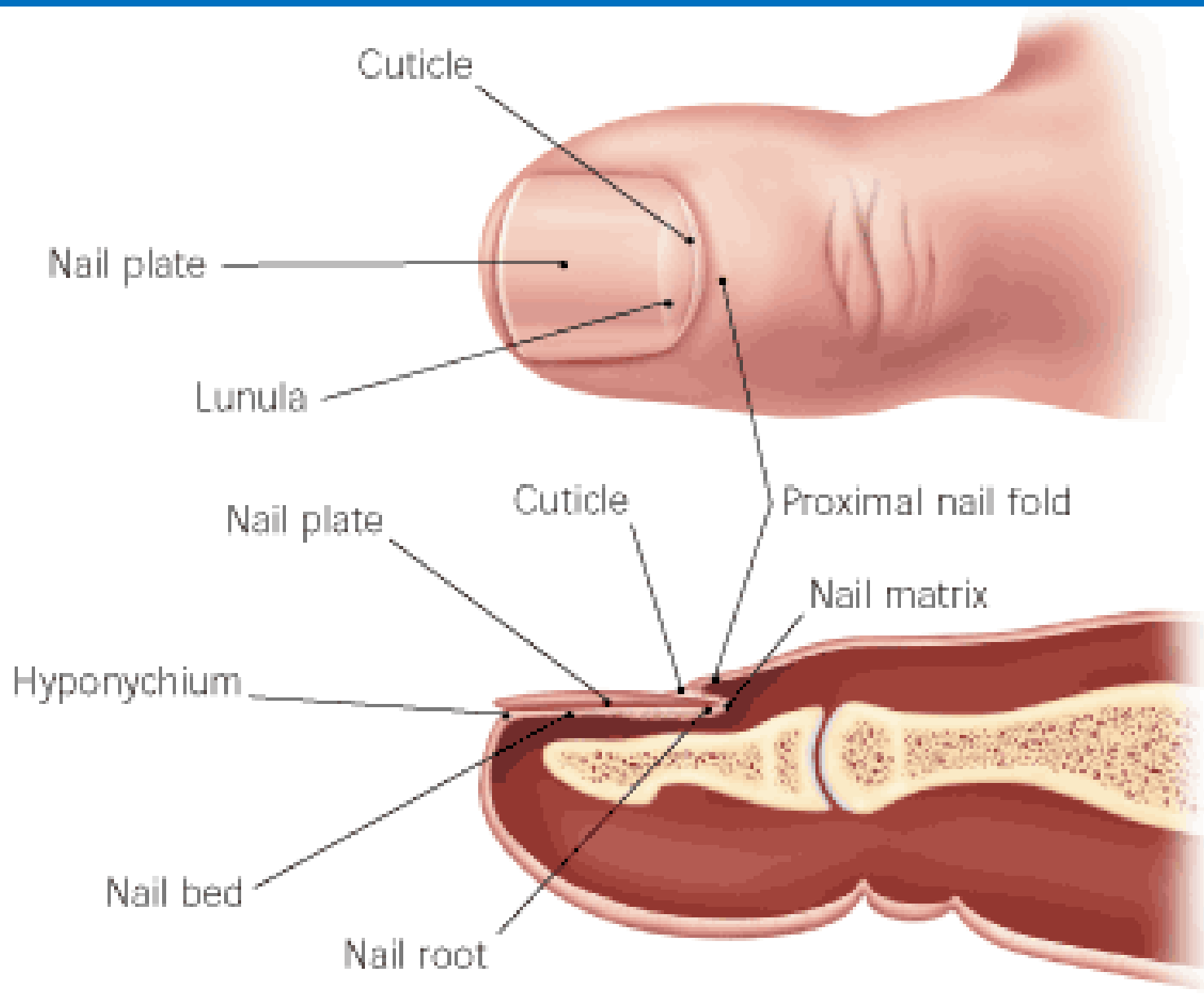
Tırnak tipleri



Şekil 4-10. Son parmaktan sagittal kesit. Tamamen siyah alanlar stratum korneum'u temsil etmektedir.

Tırnak tipleri





Tırnak anatomisi

Yassı tırnak



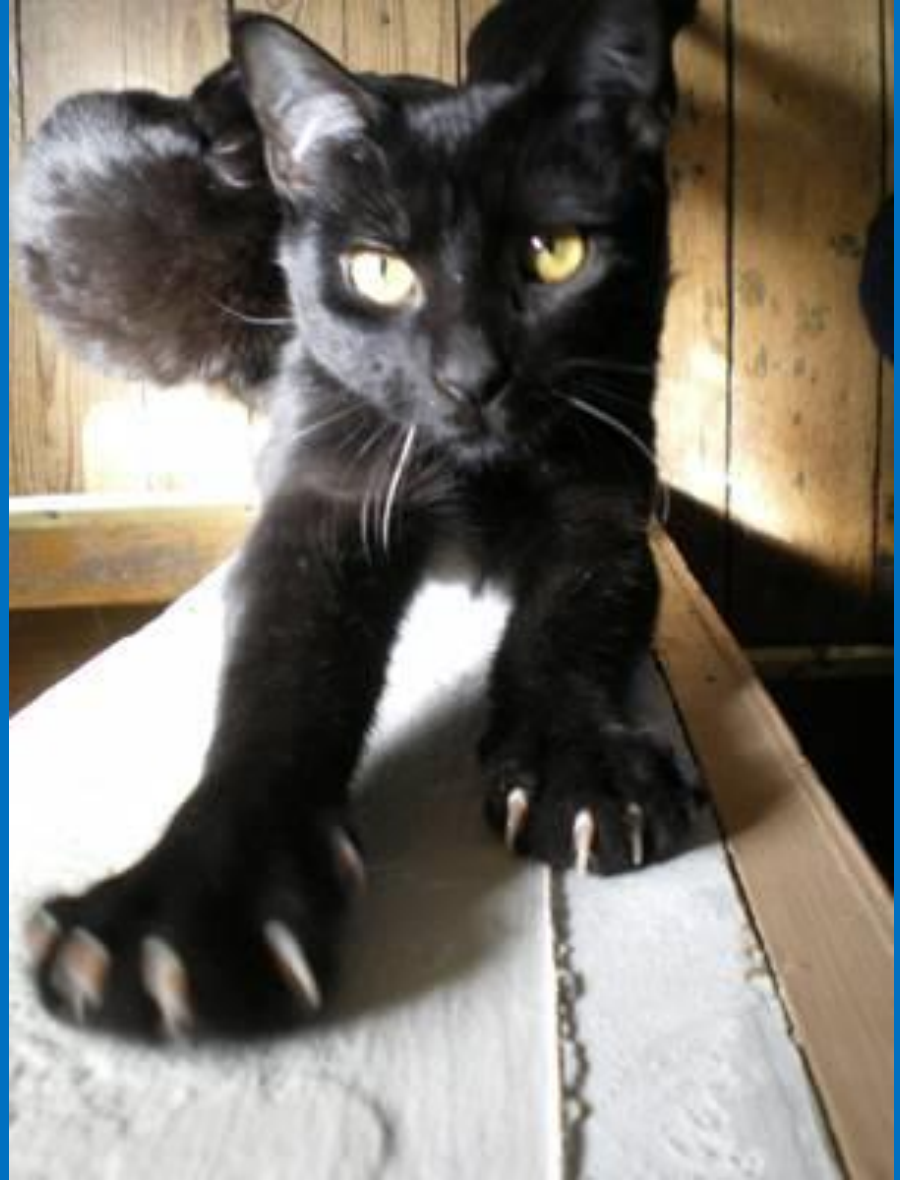
Sivri tirnak – Pençe

Accipiter cooperii









Tek Toynak



Çift toynak





Keratin kılıflı boynuzlar



Kemik eksenini saran
keratin kılıflı boynuzlar



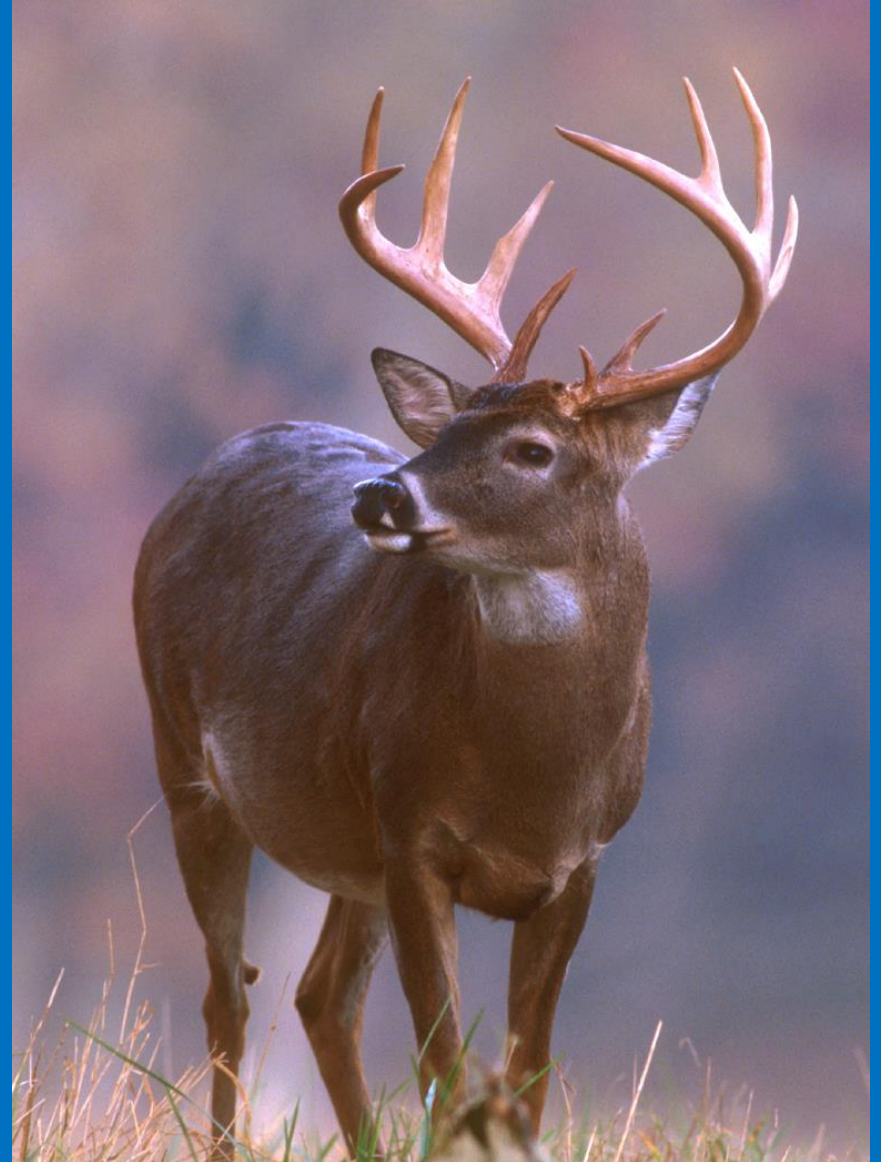
Karaca boynuzları



Capreolus capreolus



Kemik boyuzlar



Kemik boynuzlar



4-6
months



11-13
months



13-17
months



17-20
months



3.5
years

Gergedan boynuzları



evcil.us

Kuř gaları



Kurbağa – kaplumbağa gagaları



Tori'ler, Taban yastıkları, parmak izi

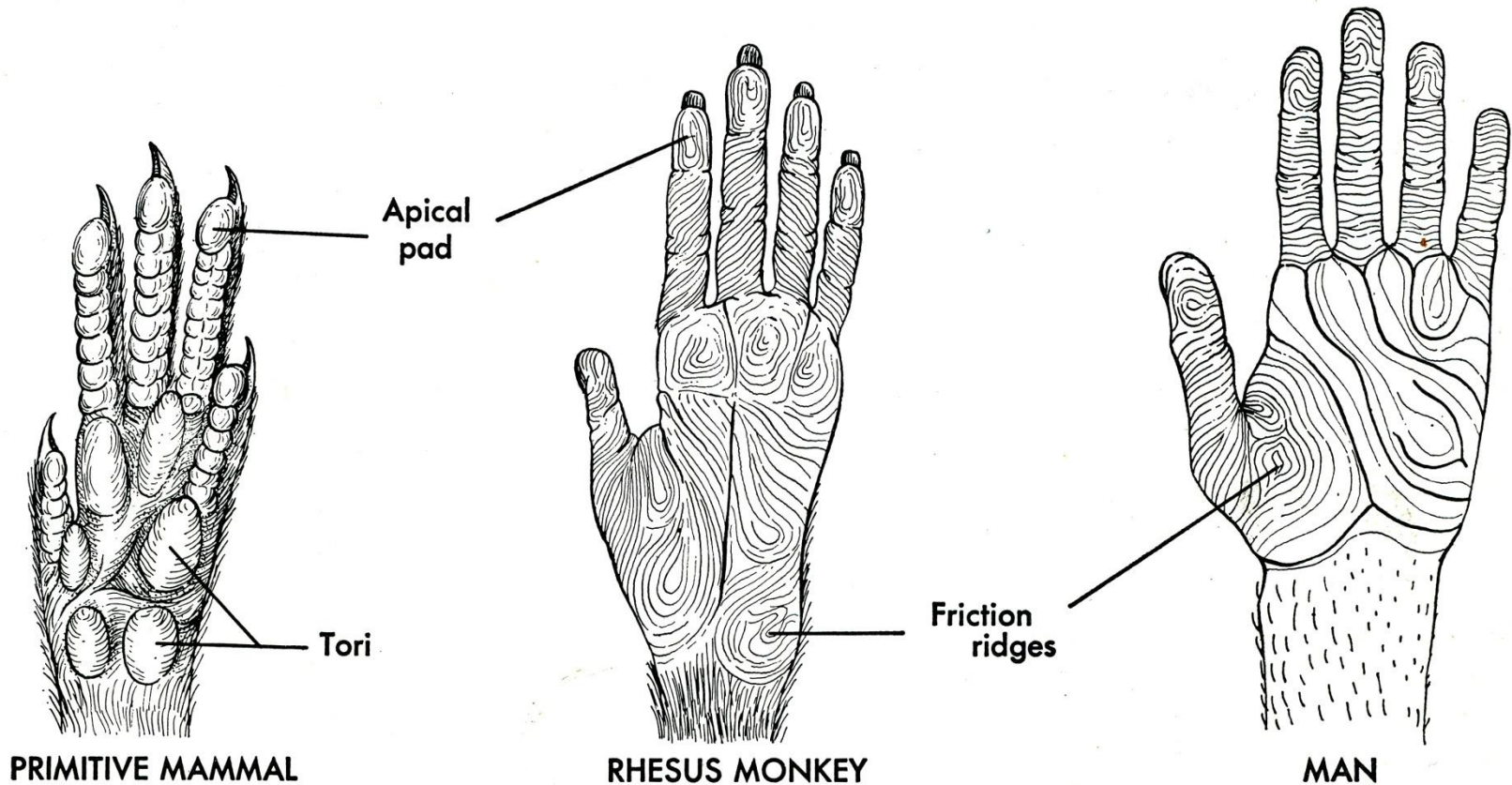


Fig. 5-37. Tori (epidermal pads) in mammals.