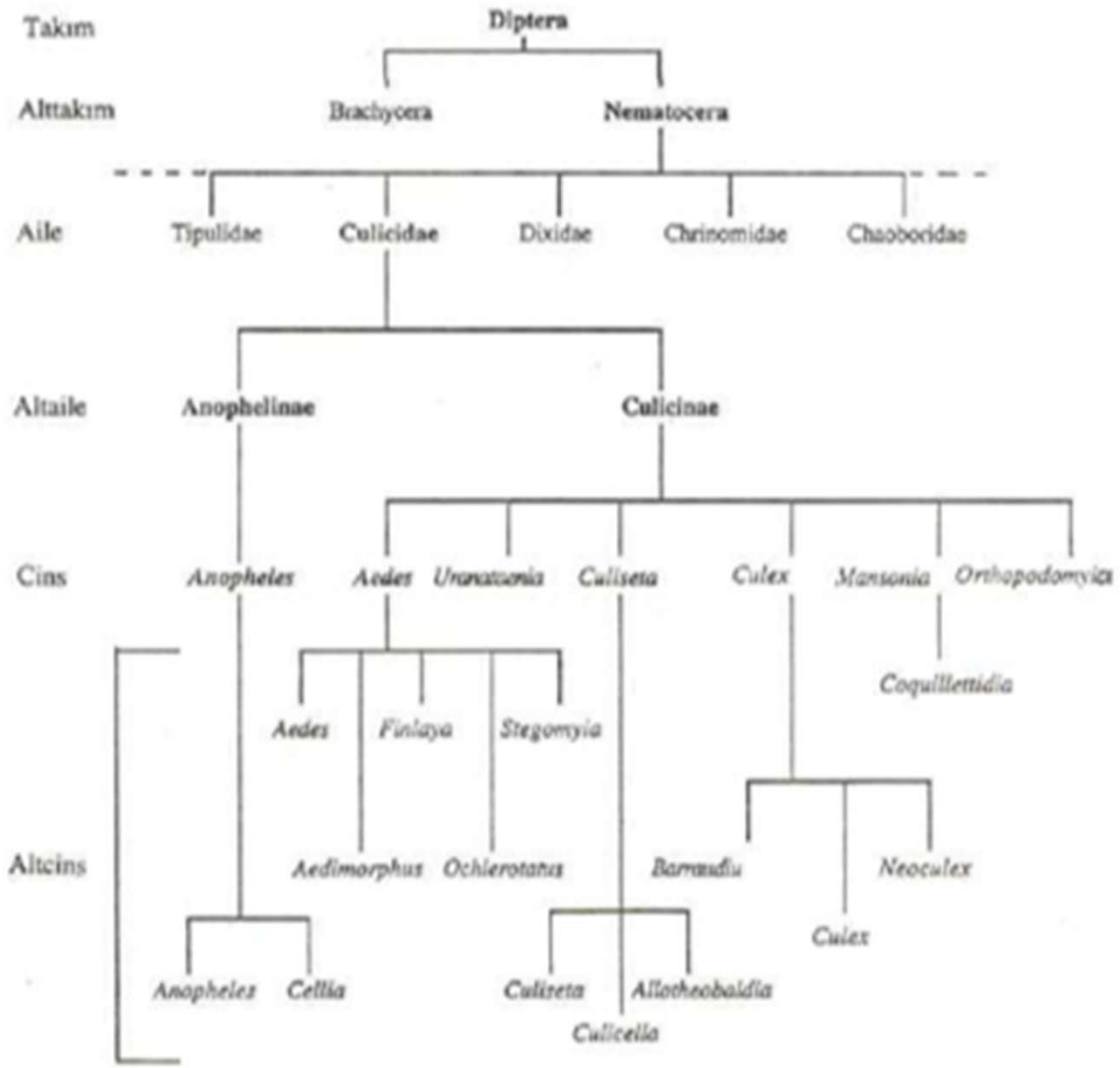
Sivrisineklerin Morfolojik Özellikleri

Sivrisineklerin Sınıflandırılması

Eklembacaklıların Insecta (böcekler) sınıfı ve Diptera (iki kanatlılar) takımı içerisinde yer alan sivrisinekler Nematocera alt takımından olup, dünya üzerinde yaklaşık 3600 tür ile temsil edilmektedirler.



Bilimsel Sınıflandırma (Meigen,1830)

Alem: Animalia (Hayvanlar)

Şube: Arthropoda (Eklem bacaklılar)

Altşube: Hexapoda

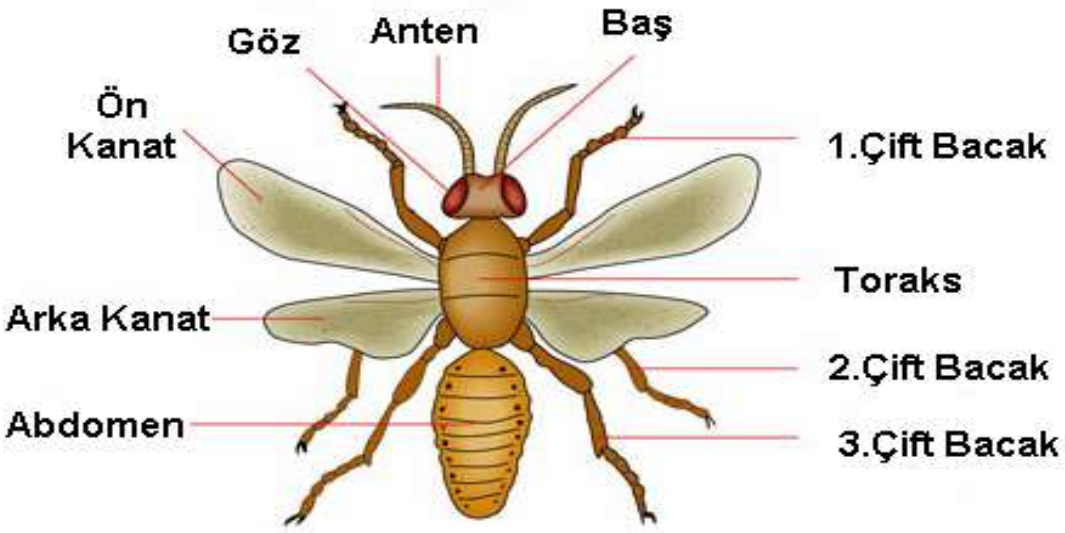
Sınıf: Insecta

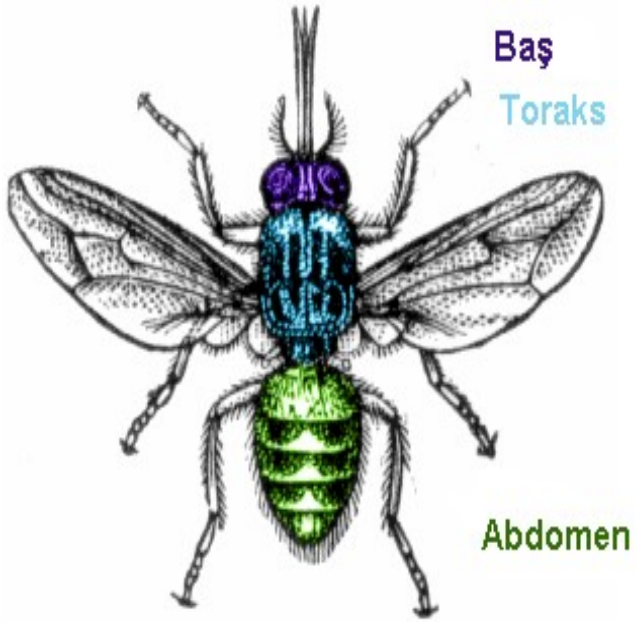
Takım: Diptera

Alttakım: Nematocera (Sivrisinekler)

Familya: Culicidae

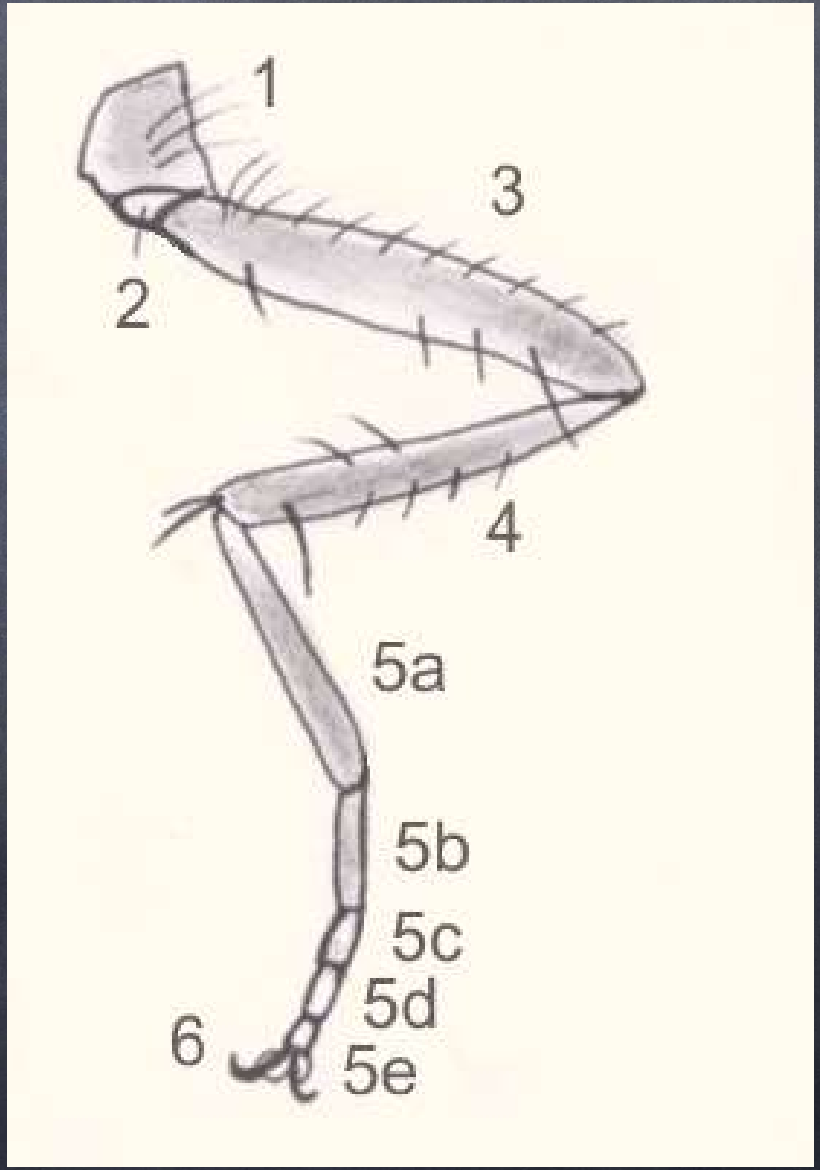
Böcek Anatomisi





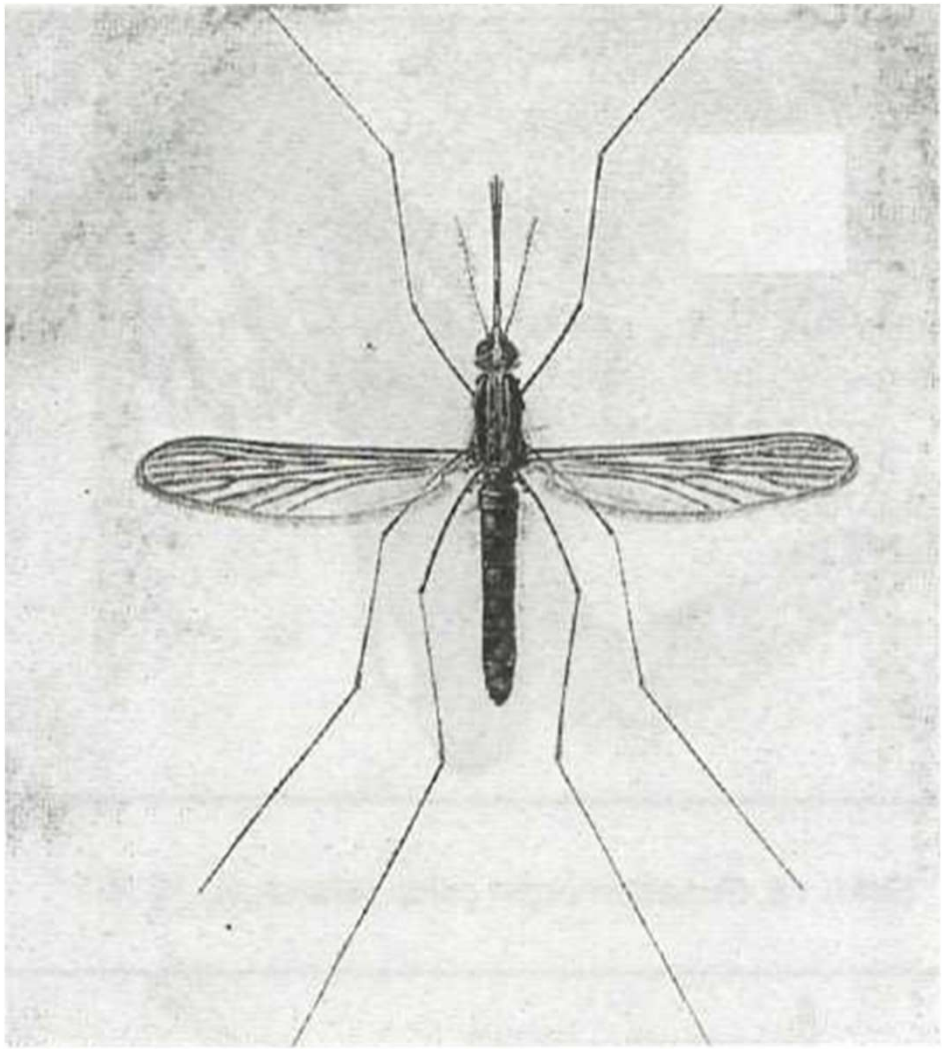
Böcek Bacak Morfolojisi

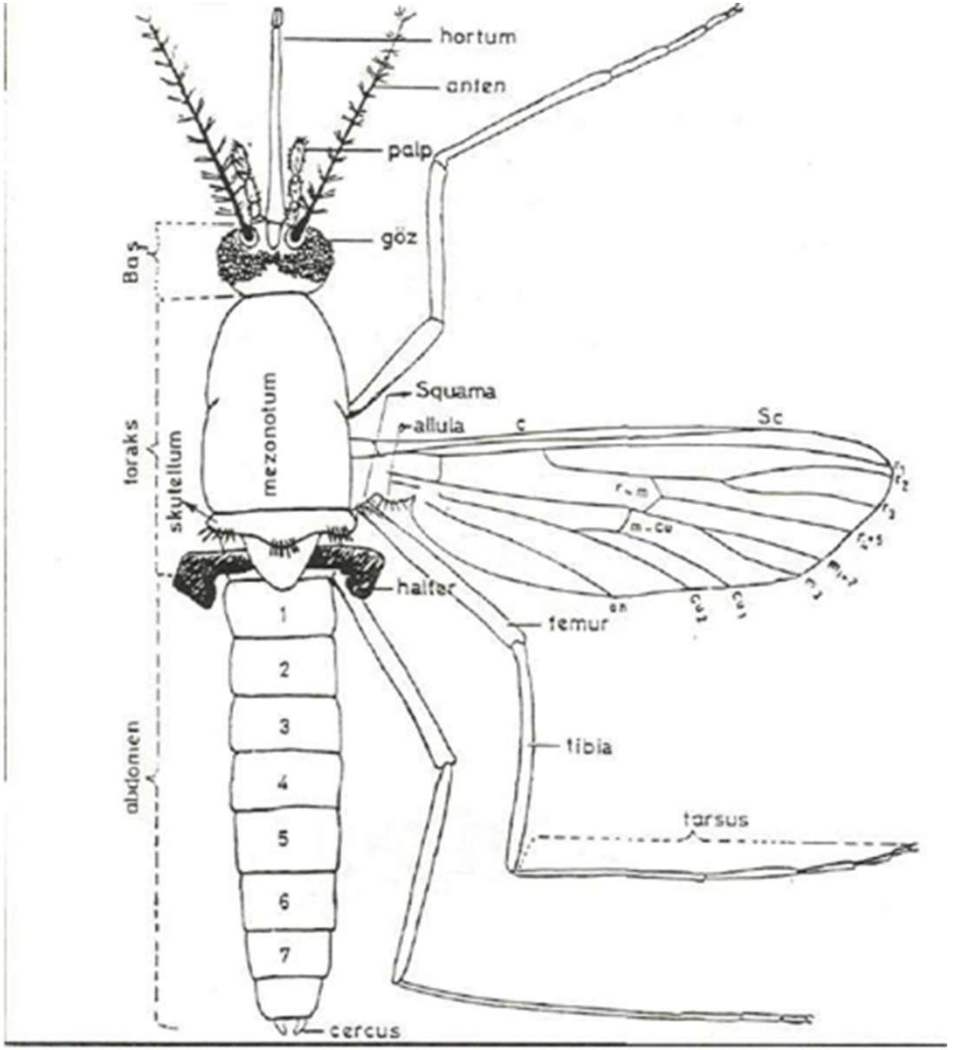
1. Kalça
2. Uyluk bileziği
3. Uyluk
4. Baldır
5. Ayak
6. Pençe



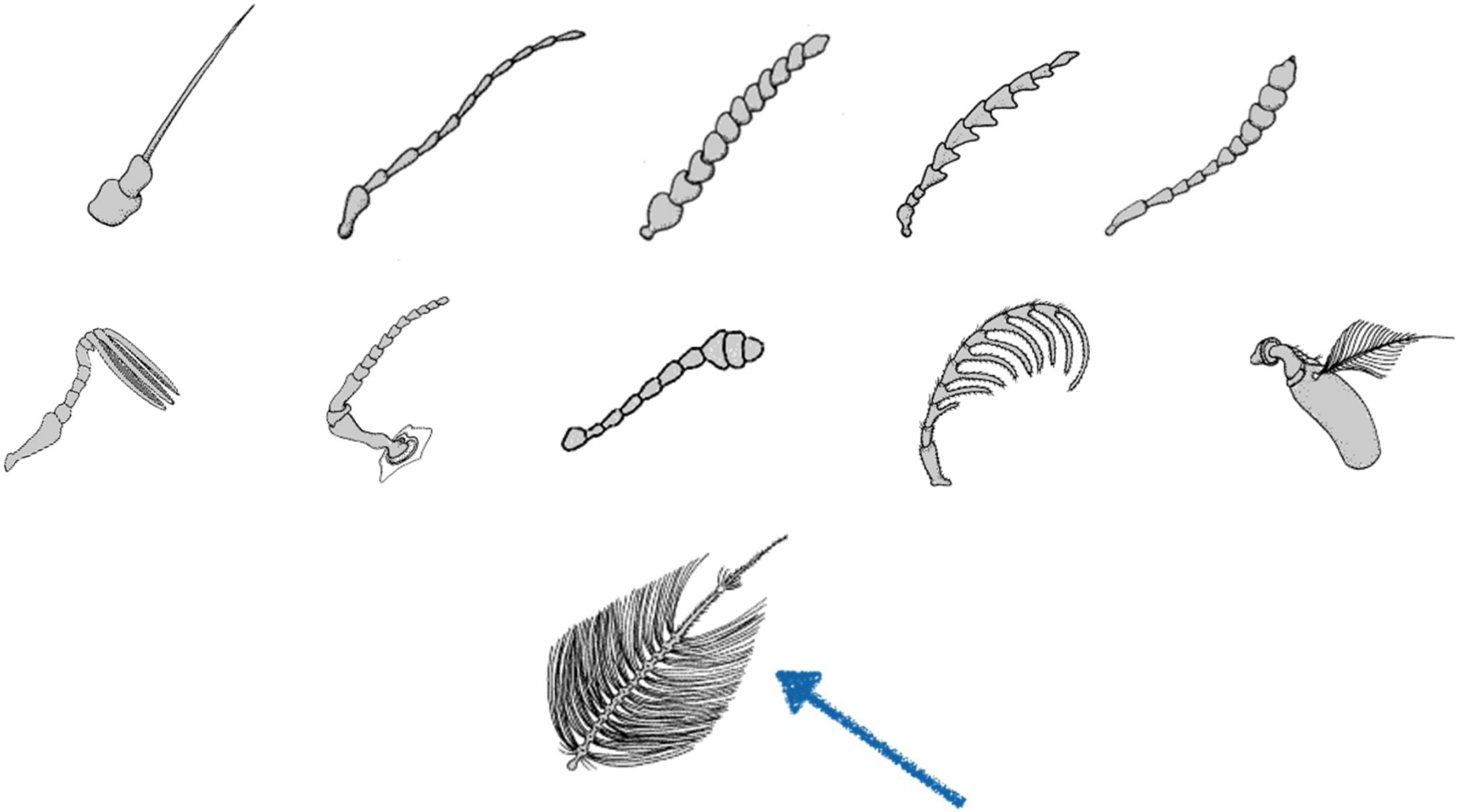
Diptera

Ergin Sivrisineğin Genel Yapısı



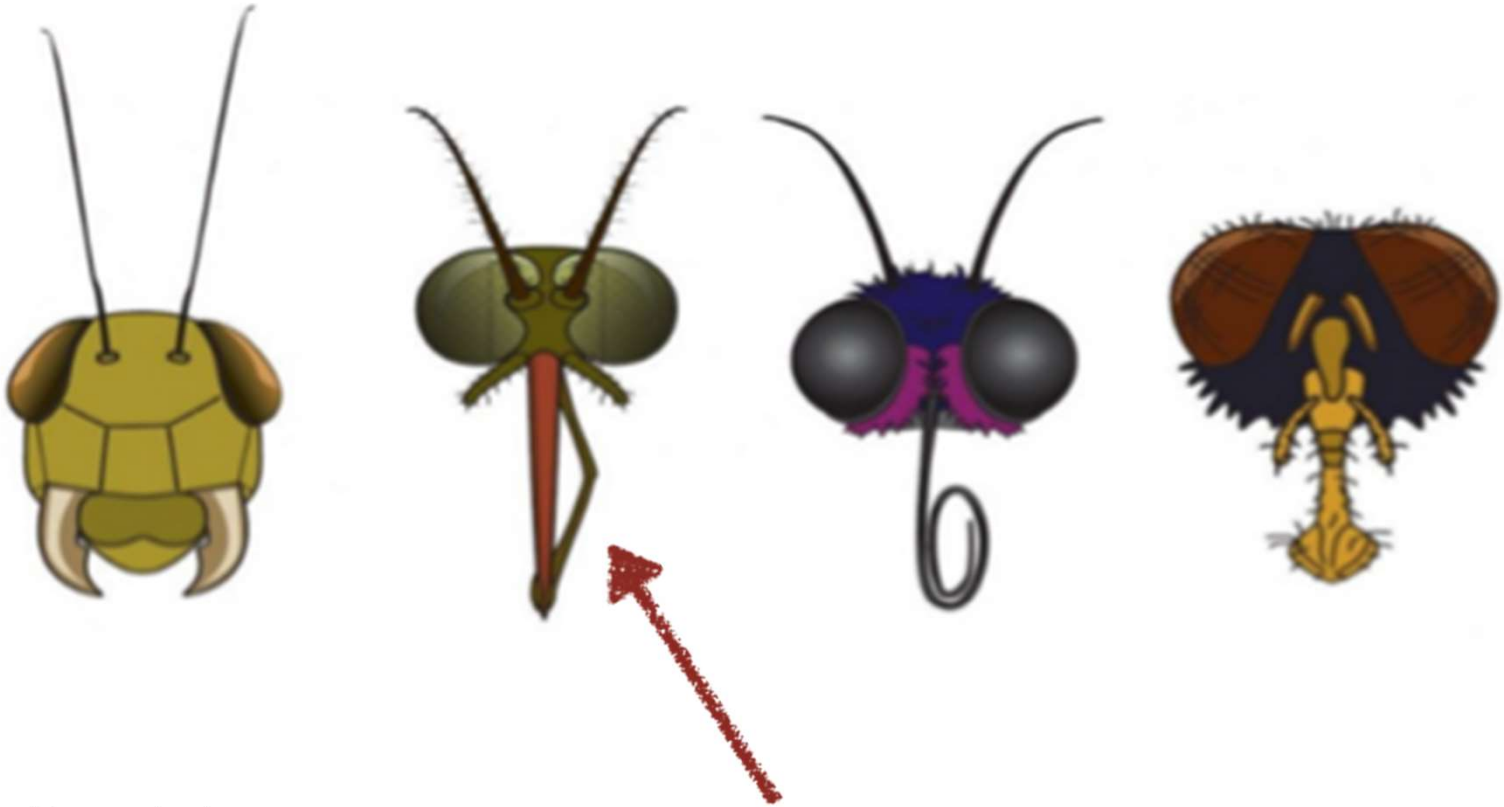


Anten Tipleri



Sivrisinek
Tüysü Anten Tipi

Böcek Ağız Yapısı ve Tipleri

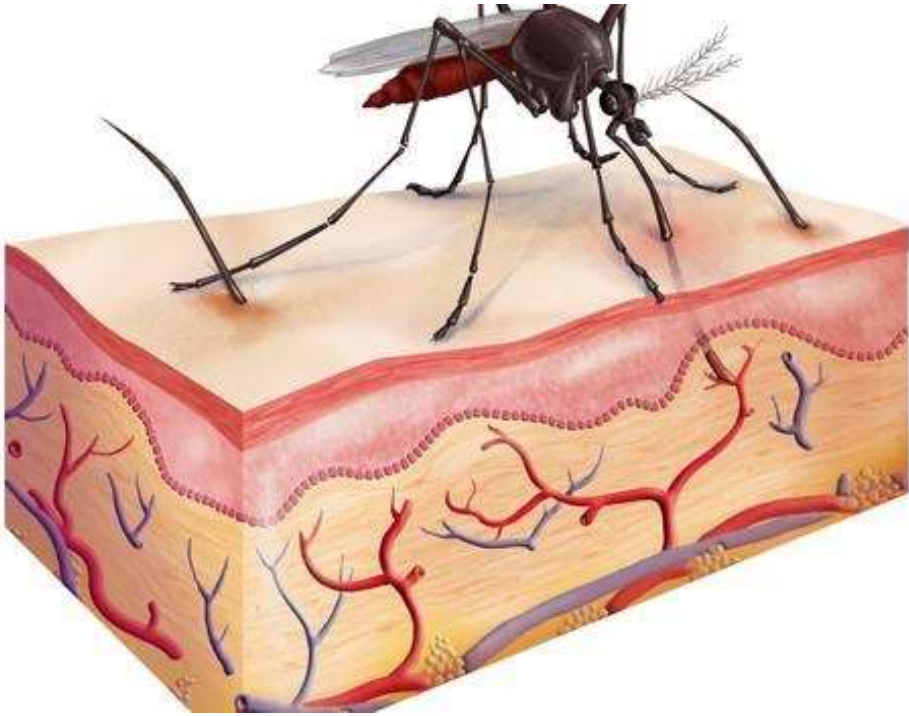


Sivrisinek Ağız Yapısı

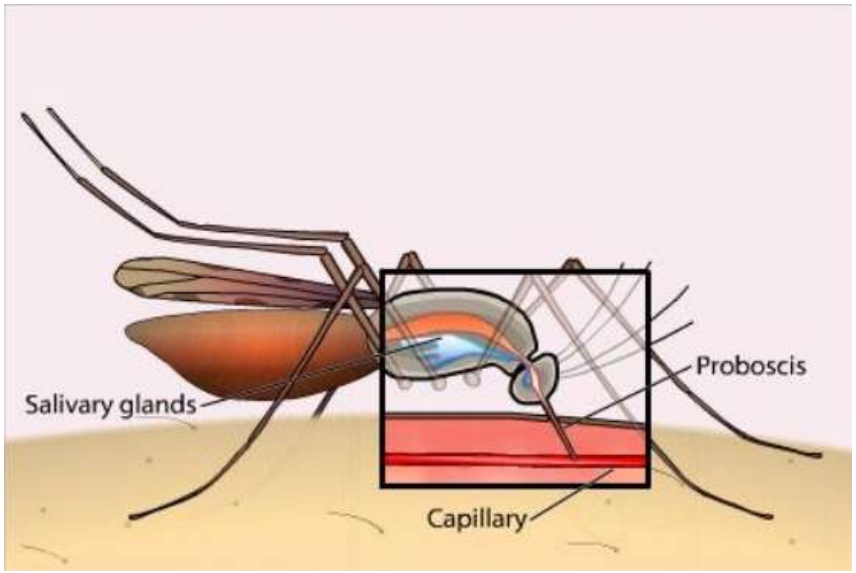
- Çiğneyici ağız tipi
- Sokucu-emici ağız tipi
- Emici ağız tipi
- Yalayıcı-emici ağız tipi

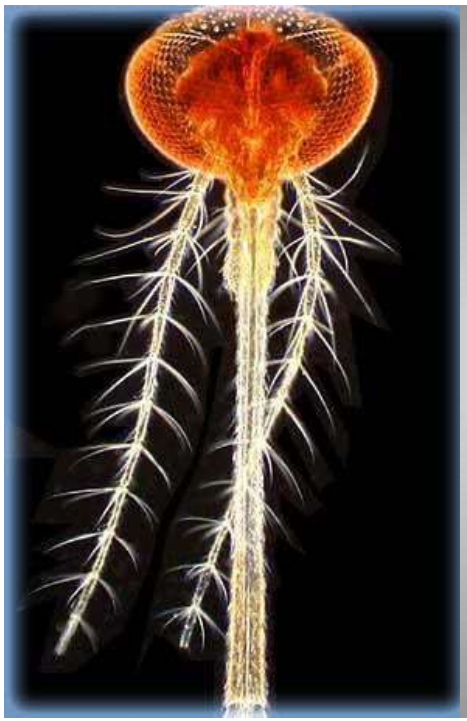
Sivrisineklerin Kan İle Beslenmesi

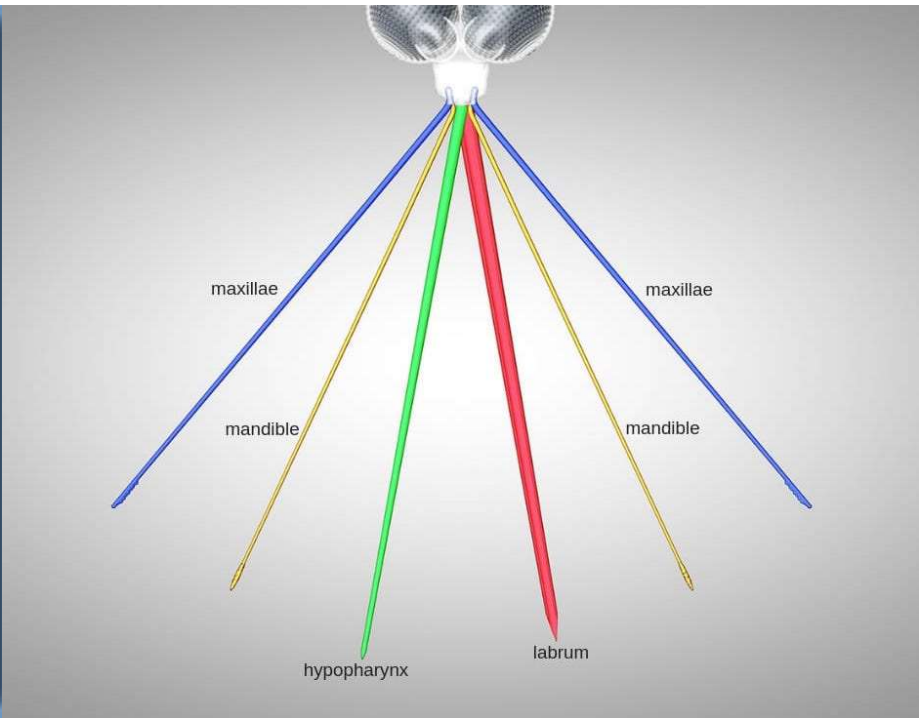
Sivrisineklerin Kan İle Beslenmesi



Sivrisineklerin Kan İle Beslenmesi



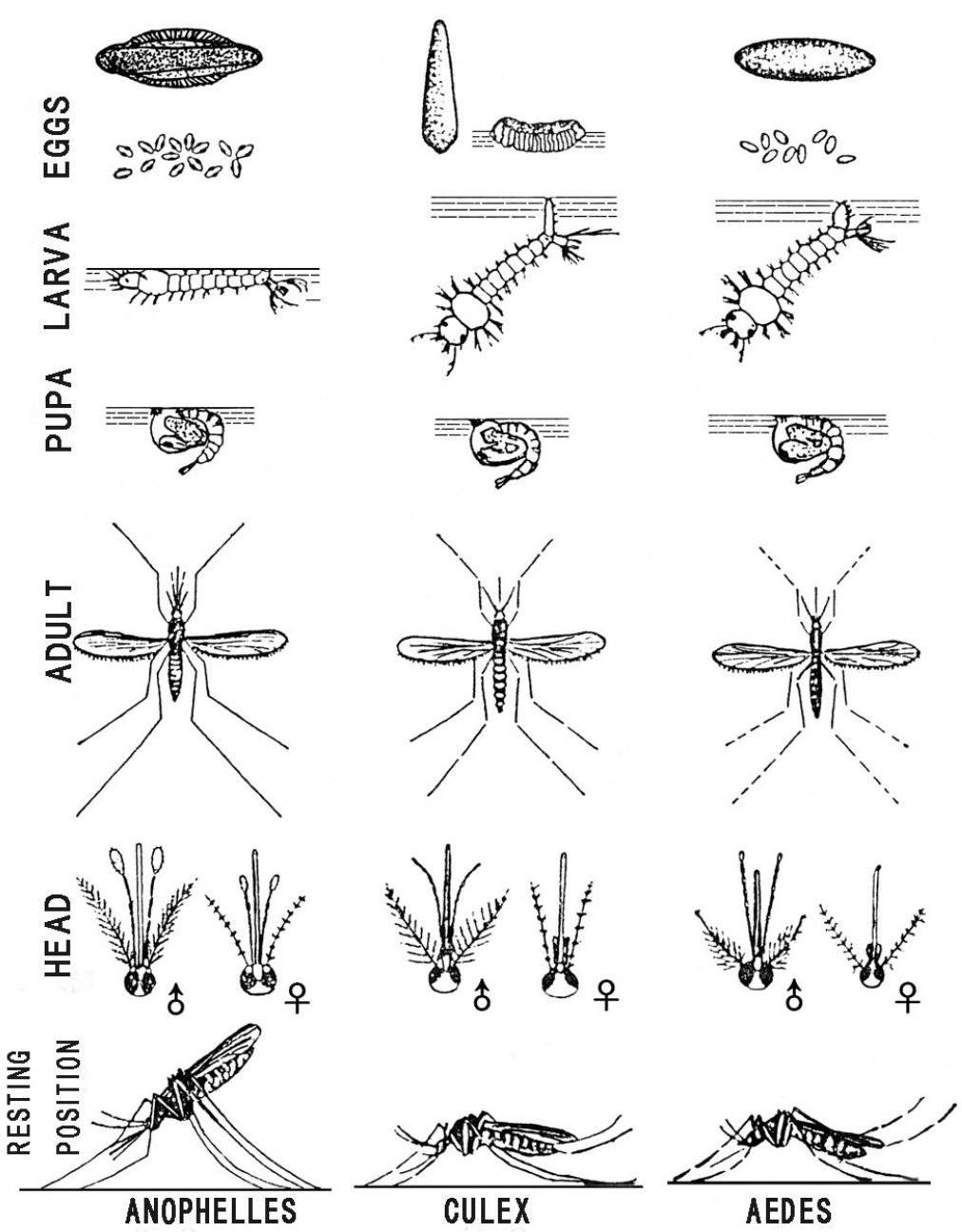




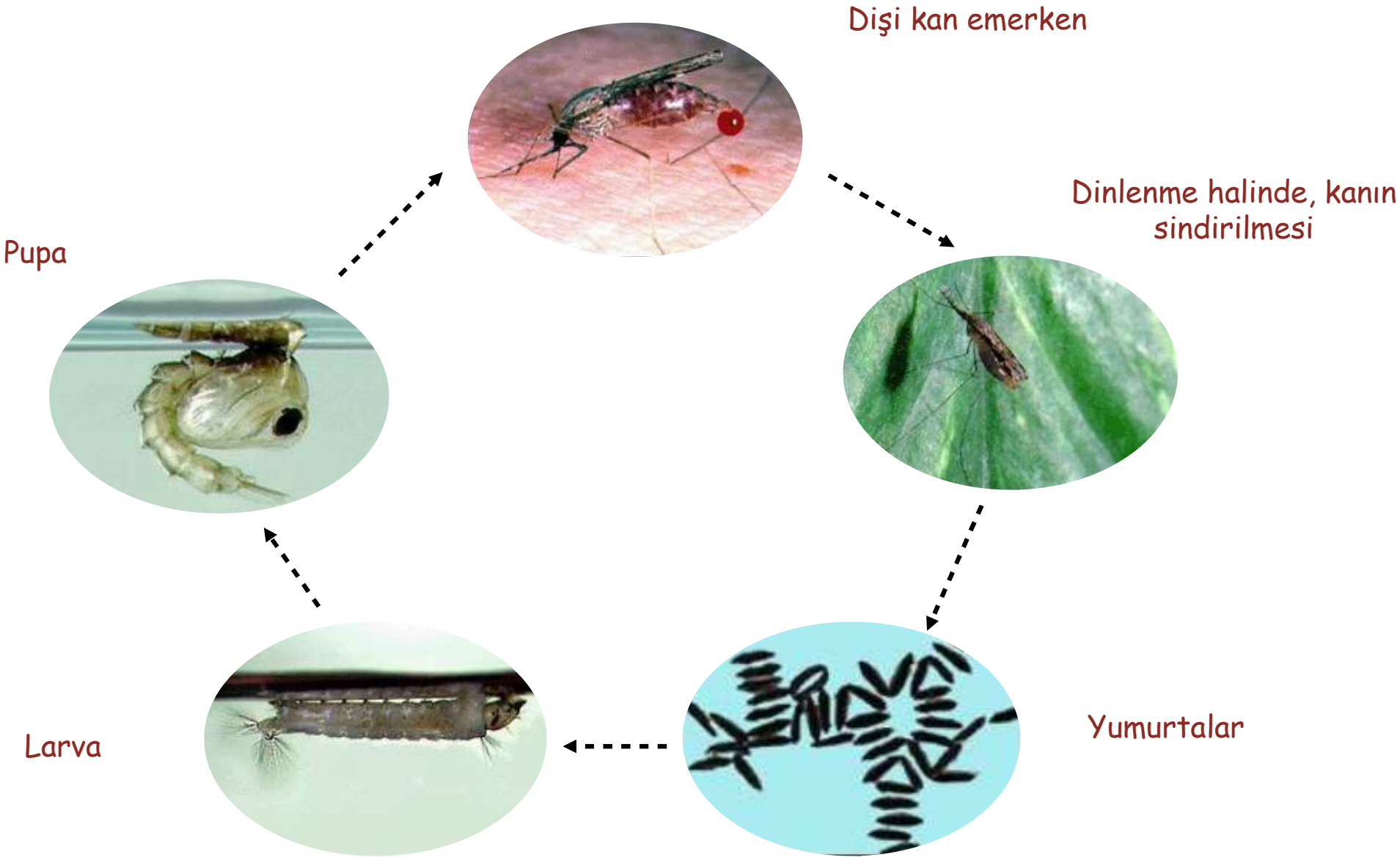
Sivrisinek Türleri

- Sivrisinekler kan ile beslenen, eklembacaklıların geniş bir grubunu temsil etmektedir.
- Tüm dünyada yaklaşık 3600 tür,
- Avrupa'da 100 tür,
- Kıbrıs'ta 23 tür ,
- Yerli cins (Aedes, Anopheles, Culex, Coquillettidia, Culiseta, Orthopodomyia, Uranotaenia)
- Yabancı cins (Aedes)

Yaygın Sivrisinek Cinsleri



Anophelinae Biyolojik Döngüsü



Culisinae Biyolojik Döngüsü

Dişi kan emerken

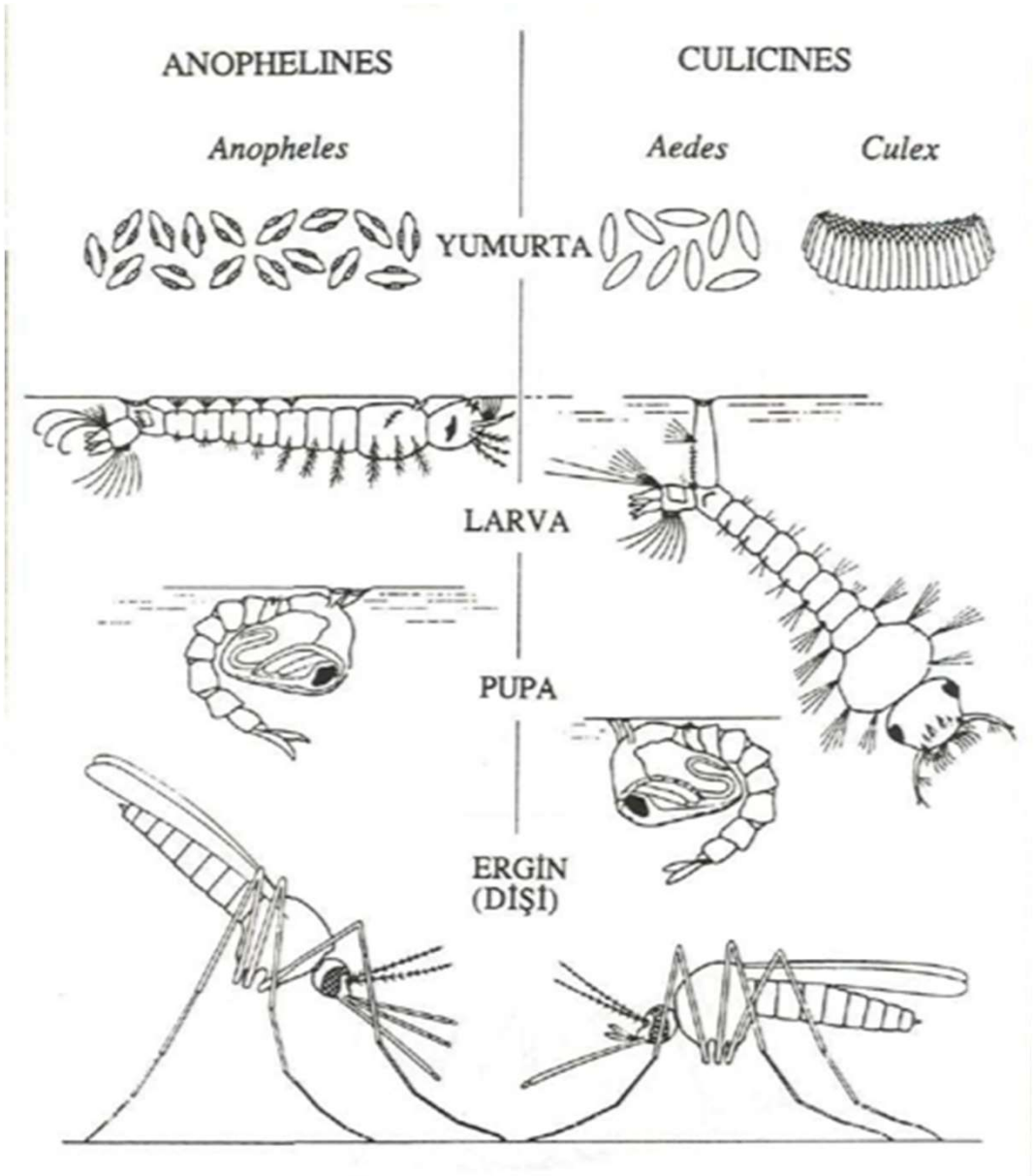
Dinlenme halinde, kanın sindirilmesi

Yumurtalar

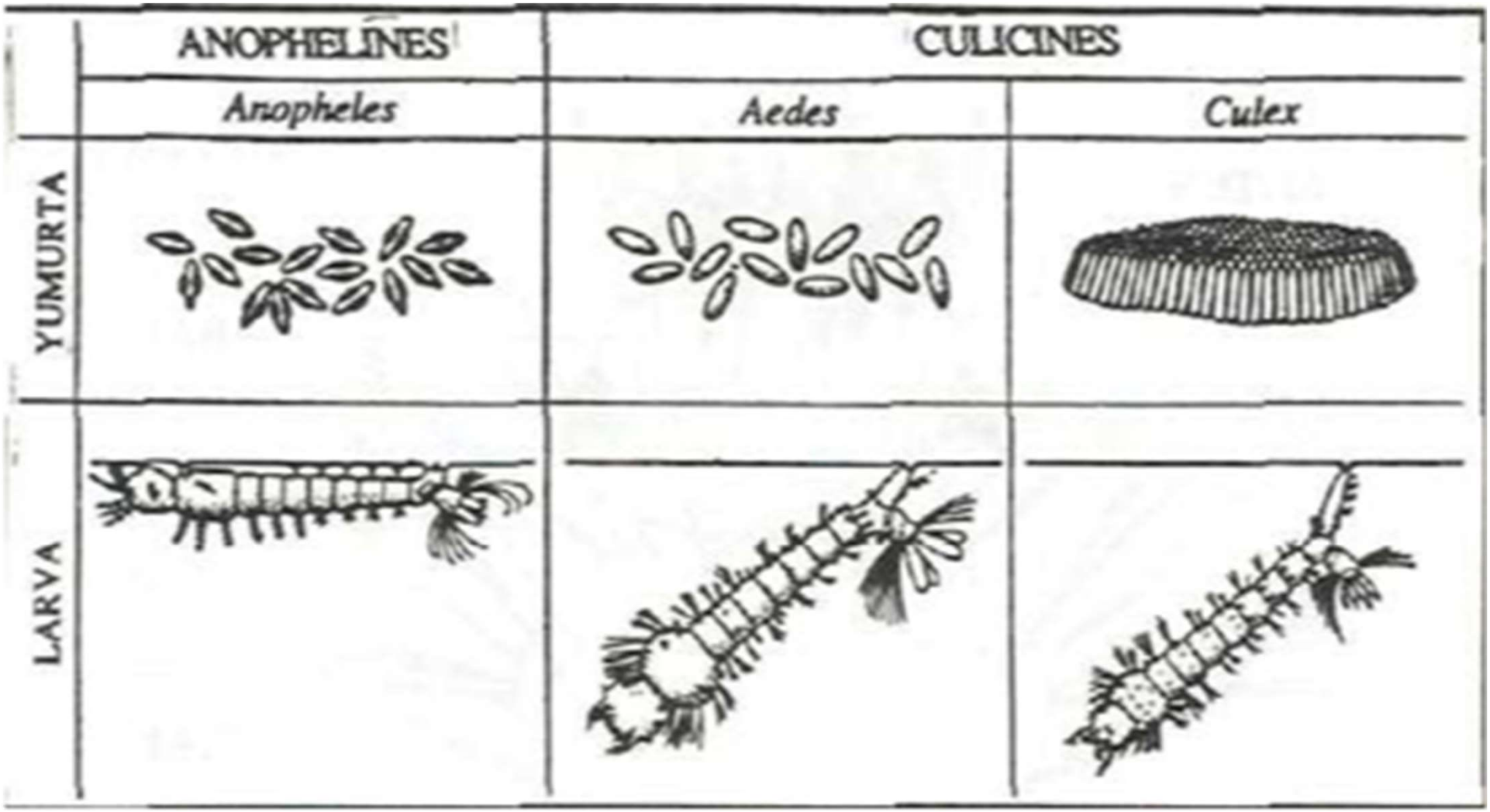
Larva

Pupa

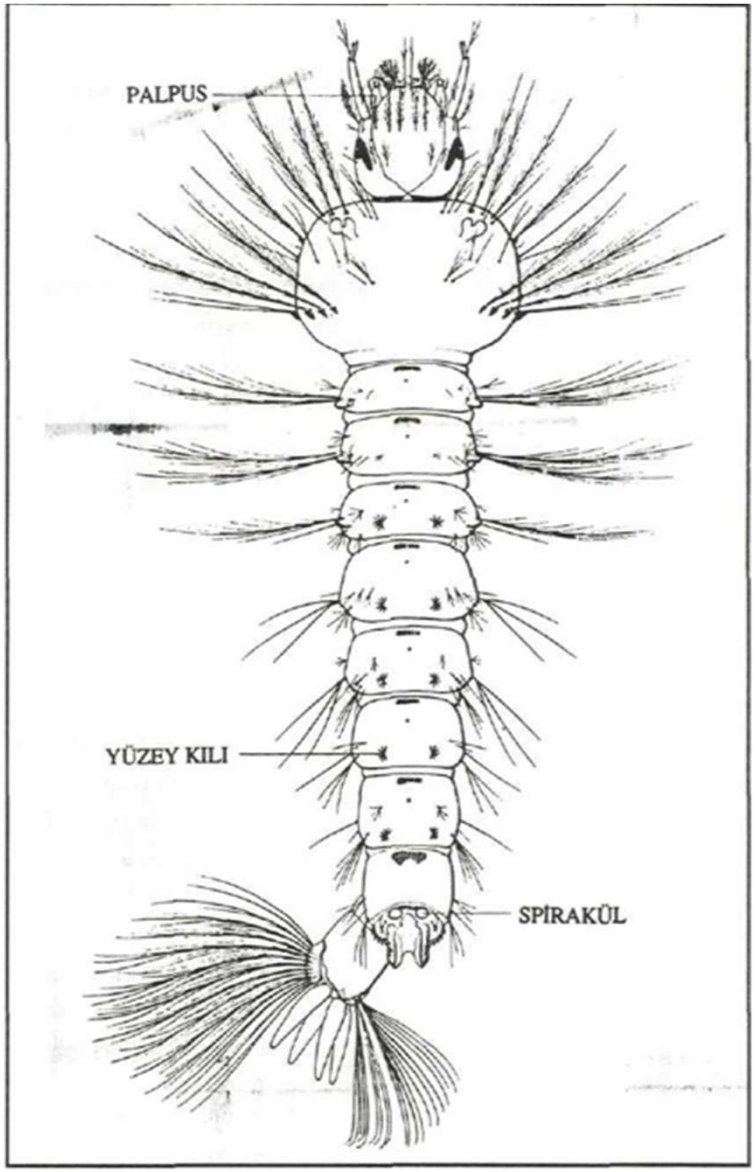
Anophelines & Culicines

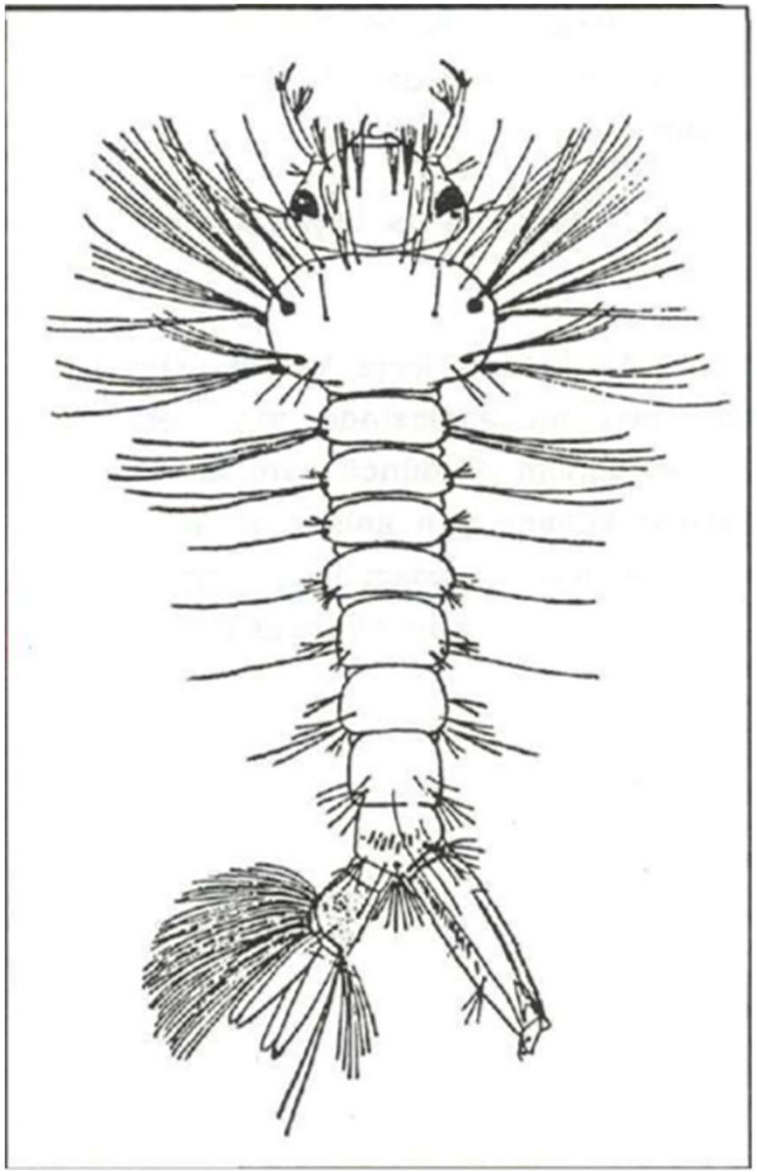


Anophelines & Culicines

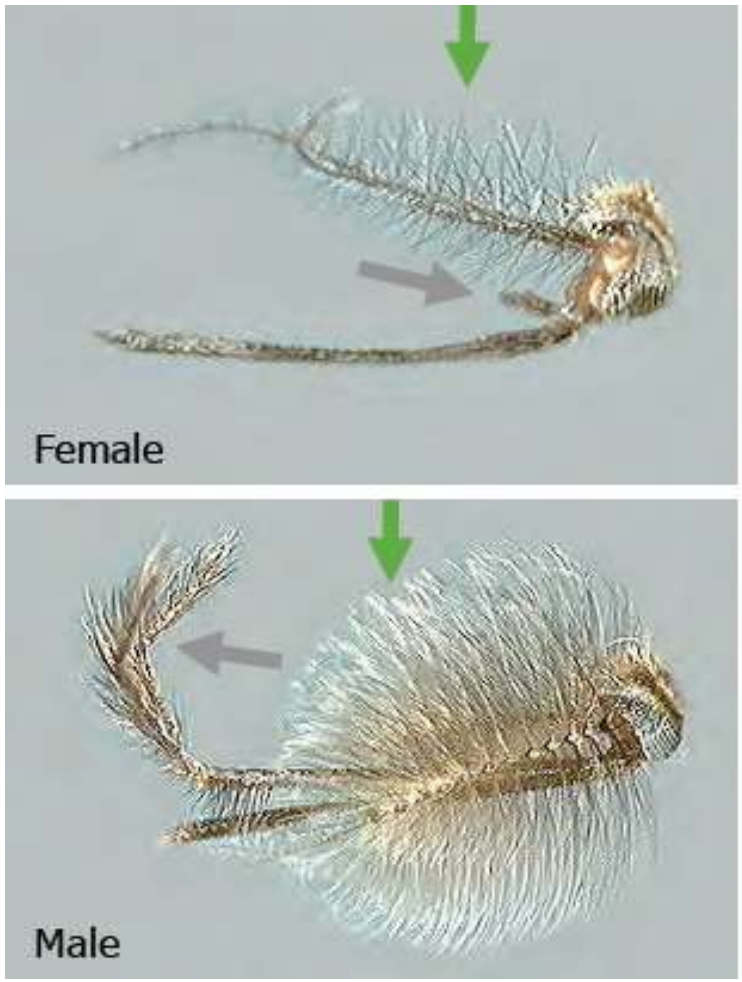


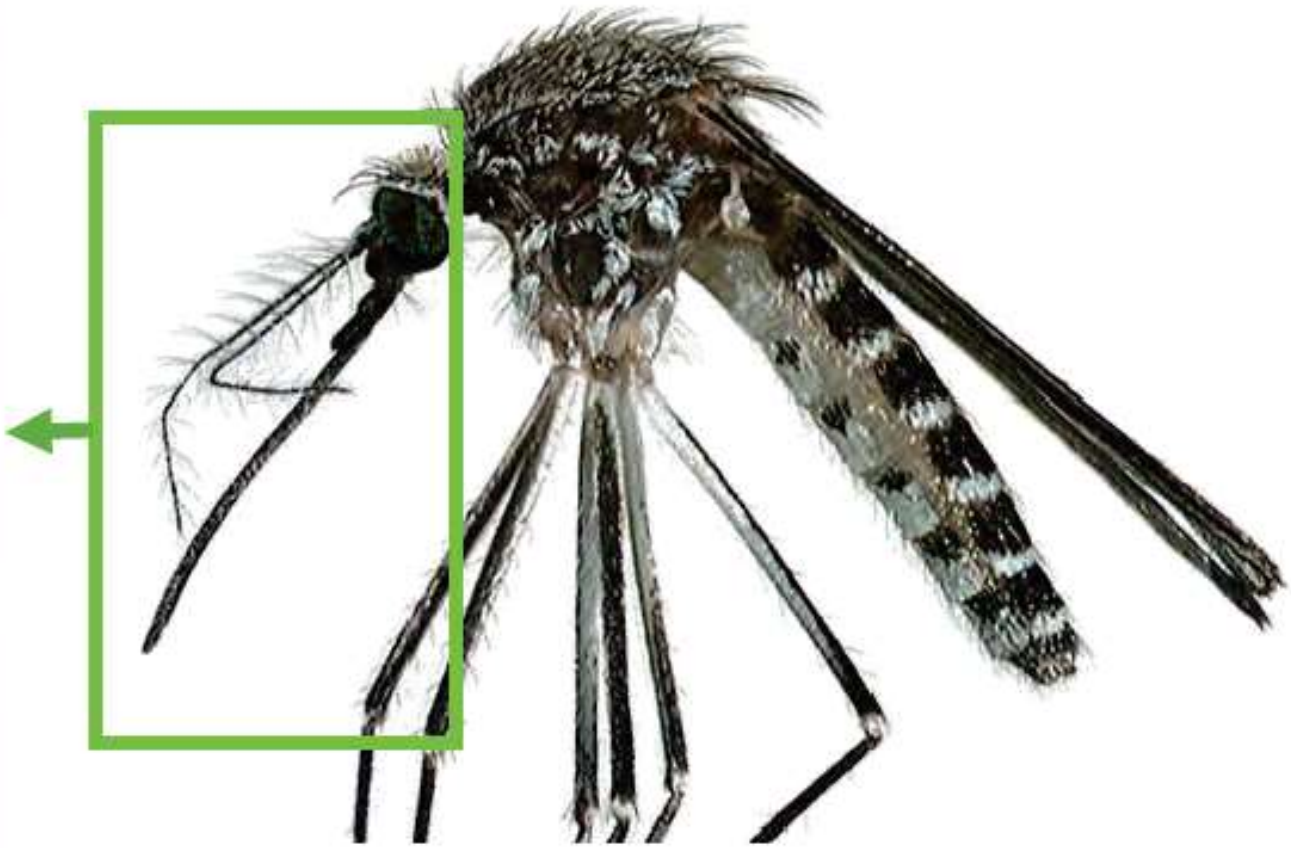
Anopheles & Culex Larva



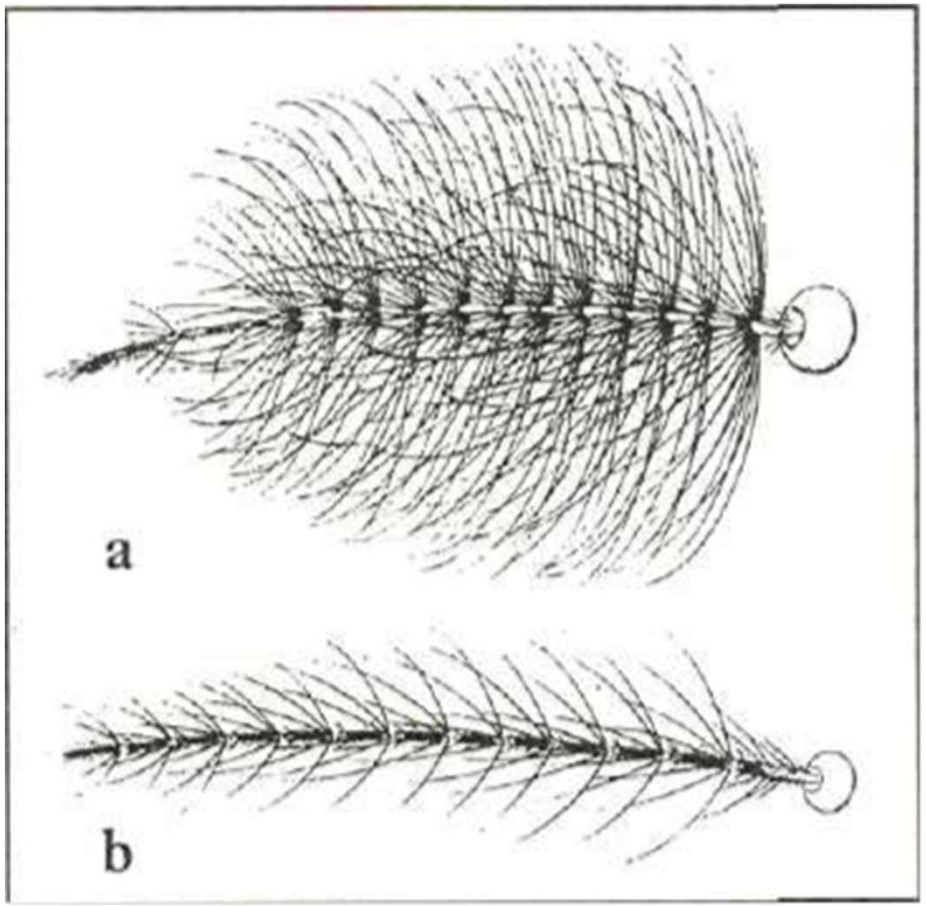


Dişi & Erkek Ergin

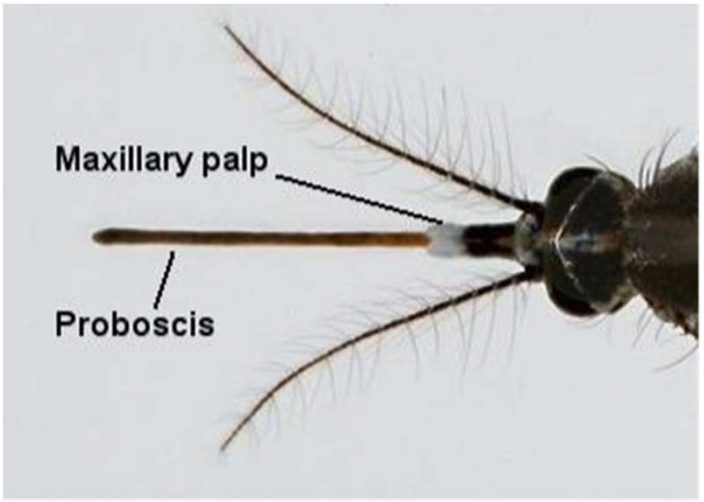




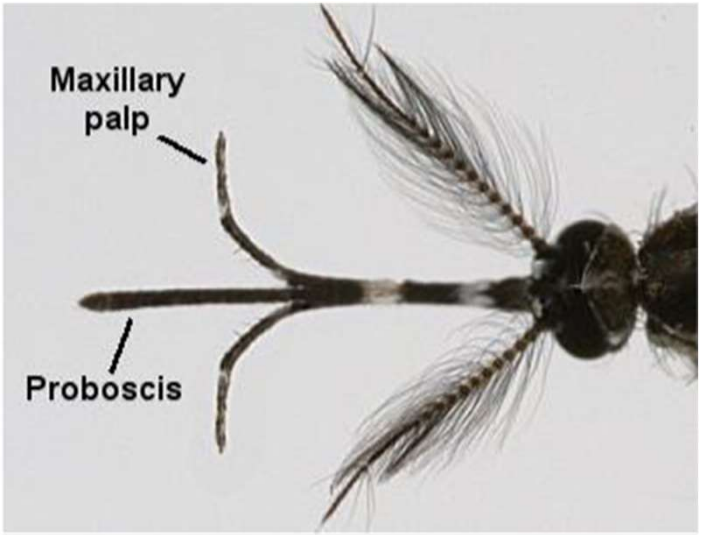
Dişi & Erkek Ergin



a) Erkek b) Dişi Anten

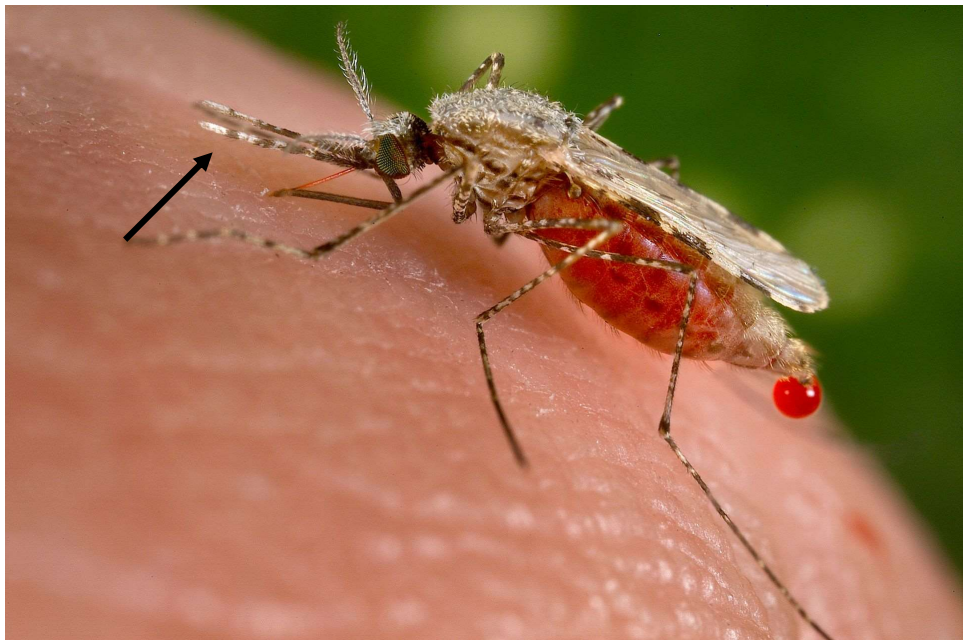


Dişi Palpus (Kısa)



Erkek Palpus (Uzun)

Erginlerin Morfolojik Karakterleri

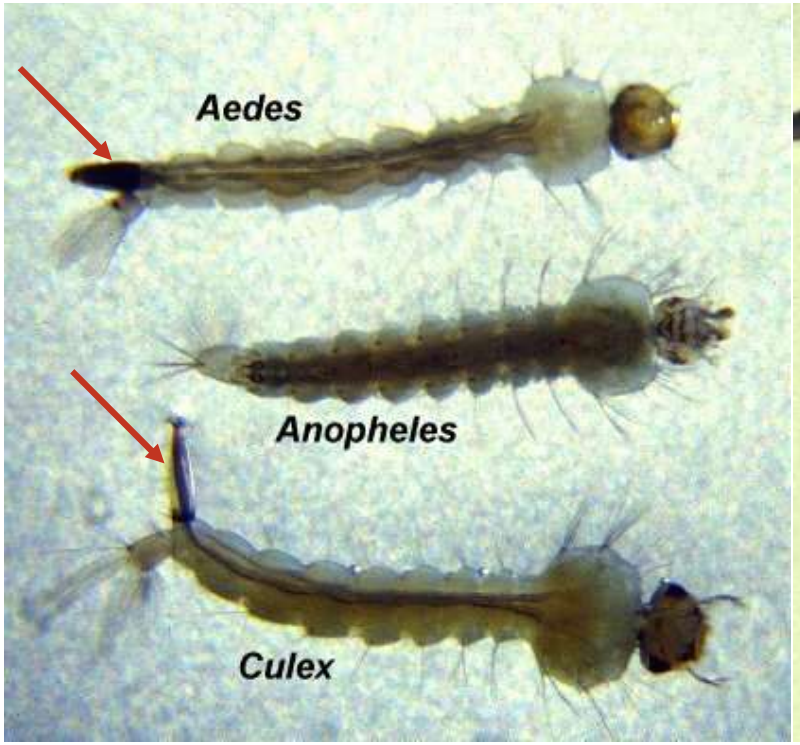


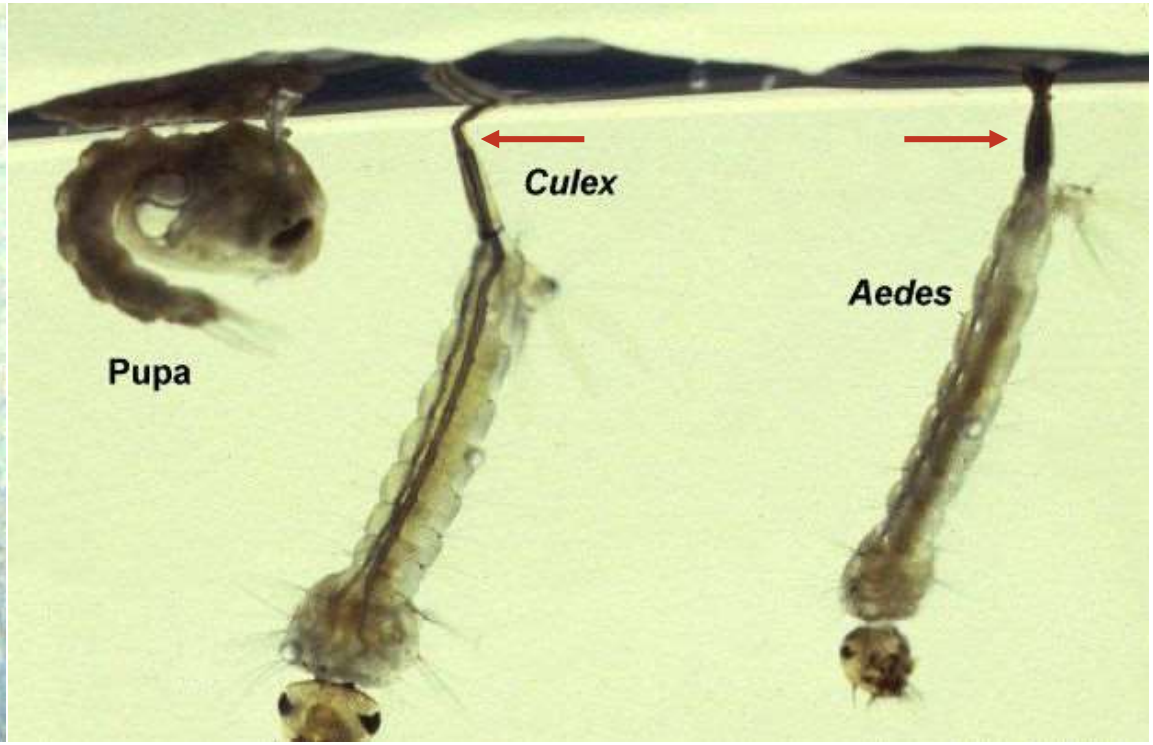
Anophelinae (Anopheles) Uzun palpuslar

Culicinae (Aedes, Culex) Kısa palpuslar

Sivrisinek Larvaları

- Solunum borusu var/yok





Sivrisinek Yumurtaları

Anopheles

Aedes

Culex

Yumurtalarını Nereye Bırakırlar?

- Su yüzeyine
  - Gruplar halinde (*Culex sp., Coquillettidia sp.*)
  - Tek tek, ayrı şekilde (*Anopheles sp.*)
- Suyun hemen dışına kuru zemine (ya da başka bir yüzeye) (*Aedes sp.*)

	ANOPHELİNES	CULICINES	
	Anopheles	*Aedes*	*Culex*
YUMURTA			

Culex sp.

Aedes sp.

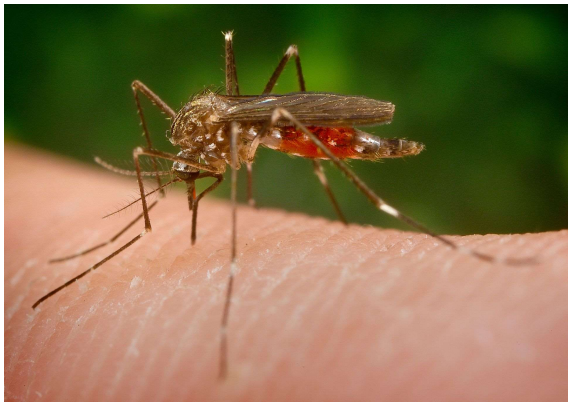
İstilacı Aedes Sivrisinekleri

- *Aedes aegypti*
- *Aedes albopictus*
- *Aedes atropalpus*
- *Aedes japonicus*
- *Aedes koreicus*
- *Aedes triseriatus*

İstilacı Sivrisinek Türleri

Aedes aegypti

Aedes albopictus

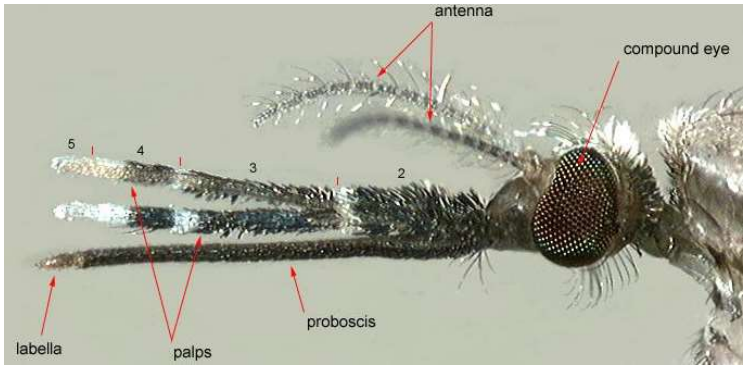


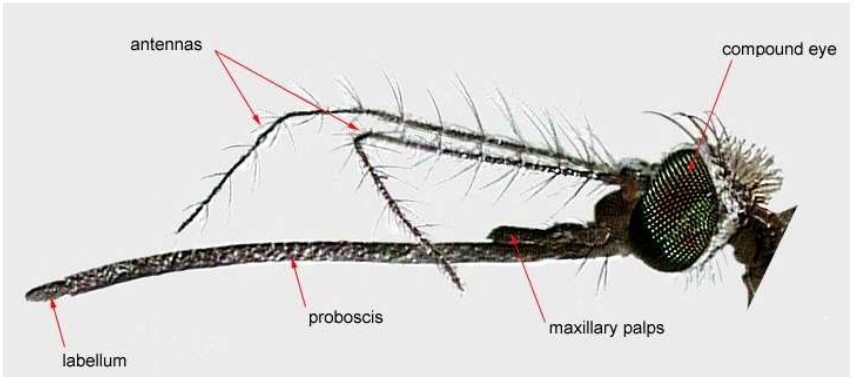
Aedes japonicus

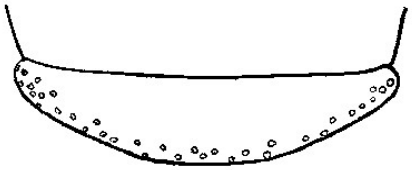
Aedes koreicus

Aedes triseriatus

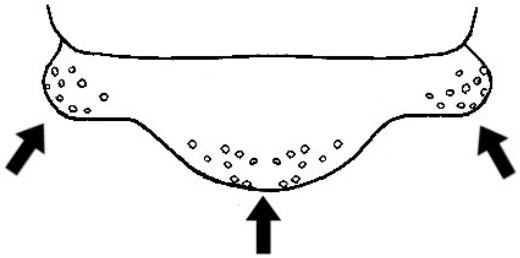
Ergin-Dişi Teşhis Anahtarı



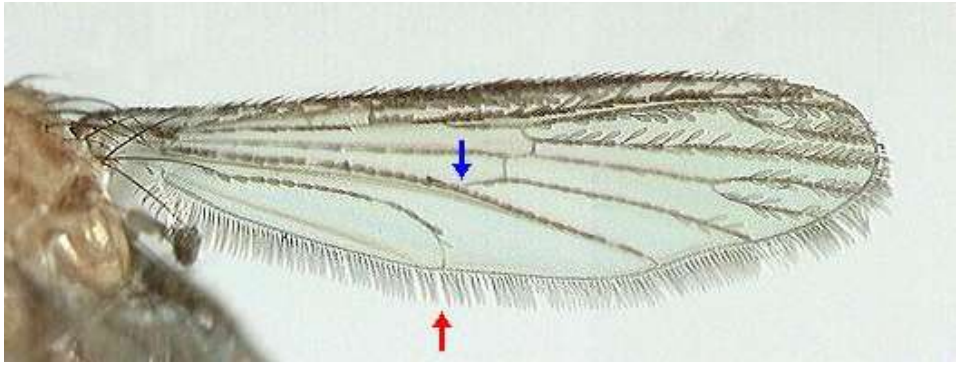


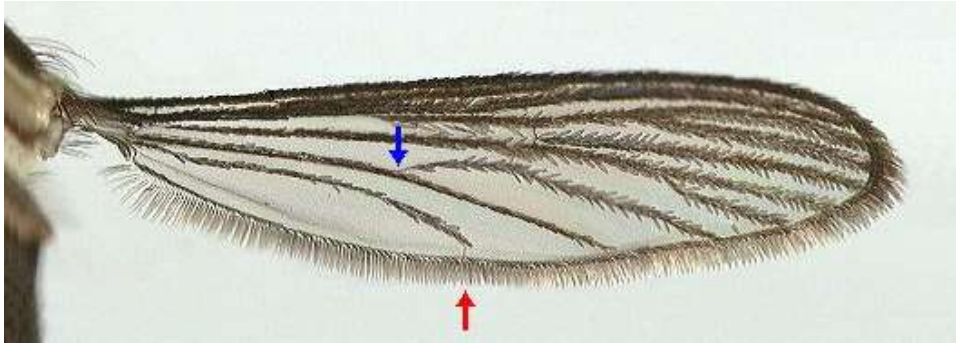


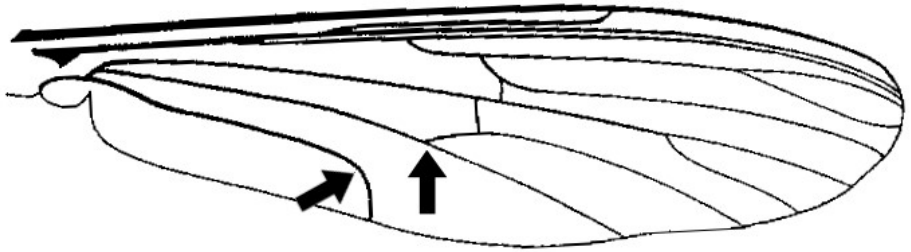
Anopheles

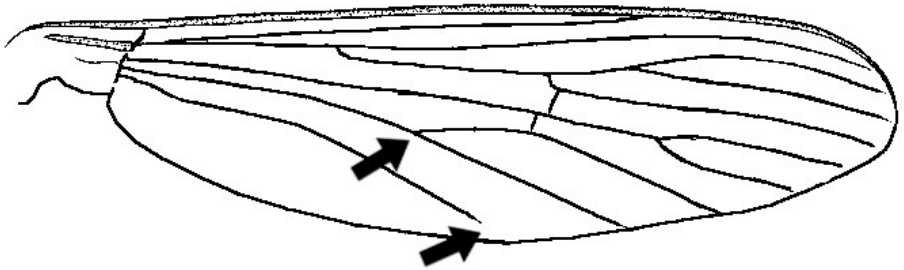


Ergin-Dişi Teşhis Anahtarı



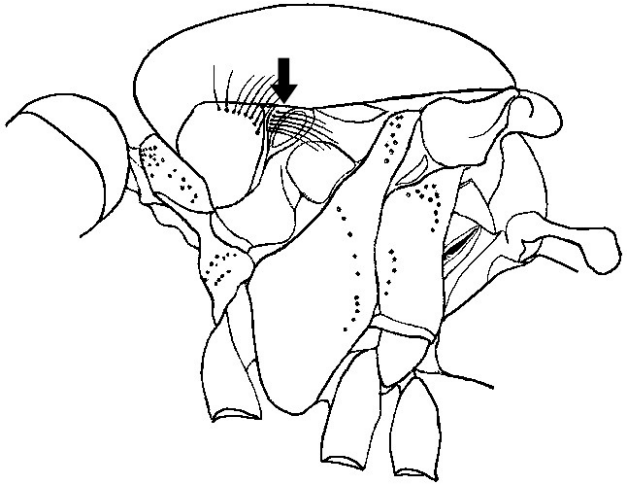


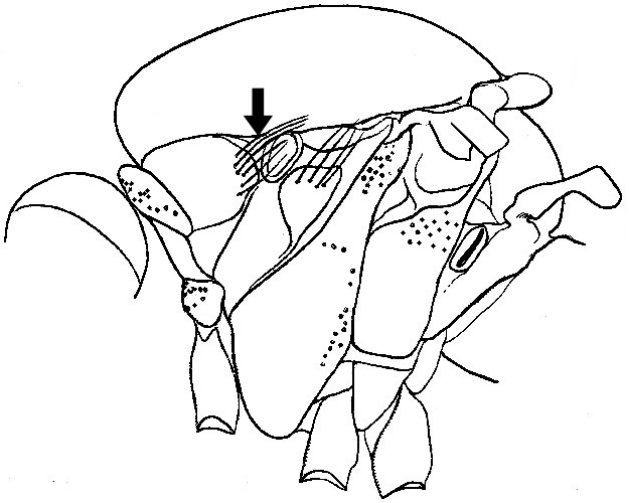




Uronotaenia unguiculata

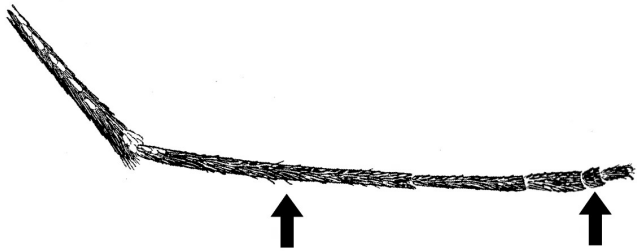
Ergin-Dişi Teşhis Anahtarı

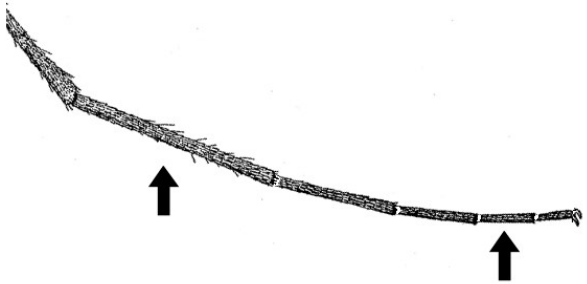


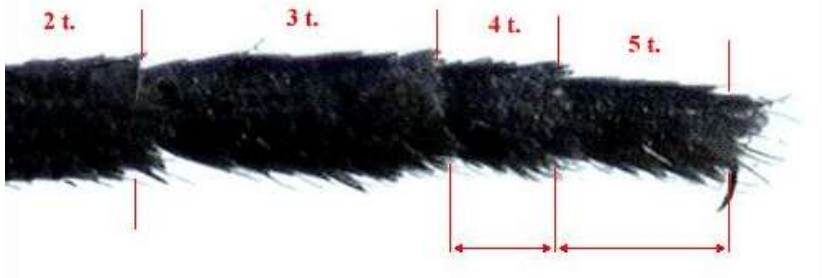


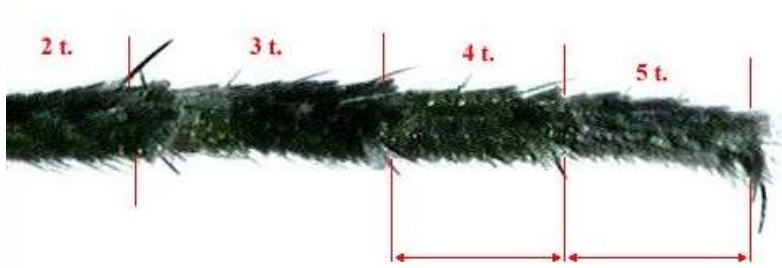
Culiseta

Ergin-Dişi Teşhis Anahtarı



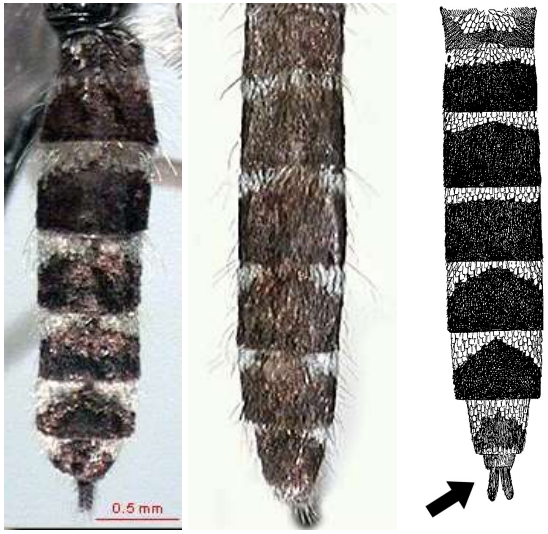


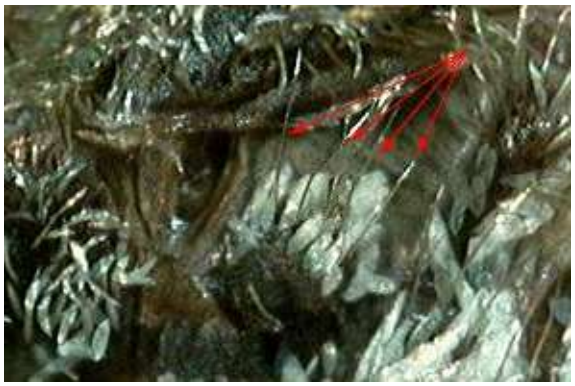


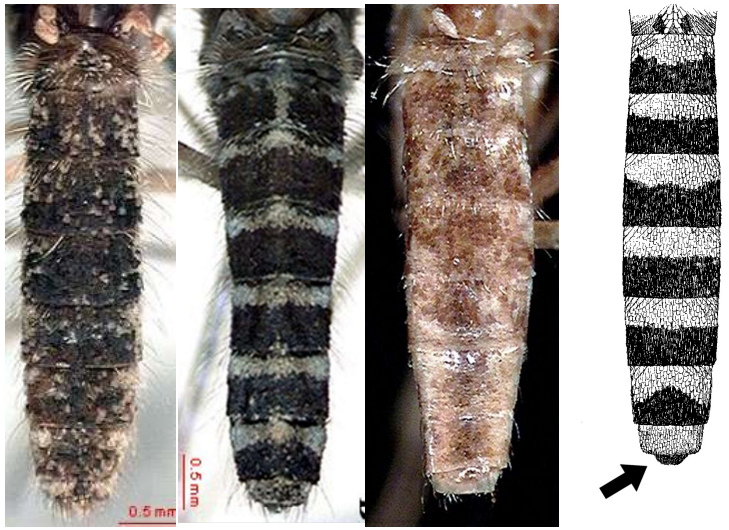


Orthopodomyia pulcripalpis

Ergin-Dişi Teşhis Anahtarı

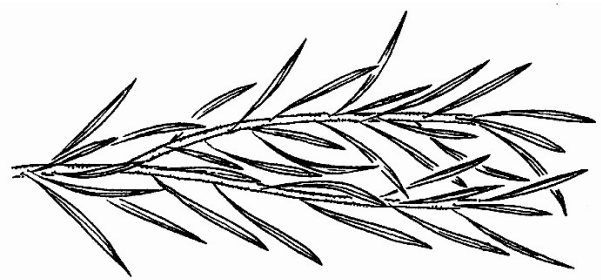


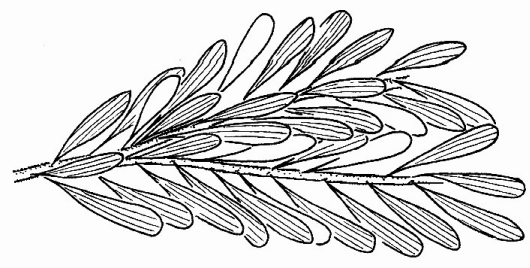


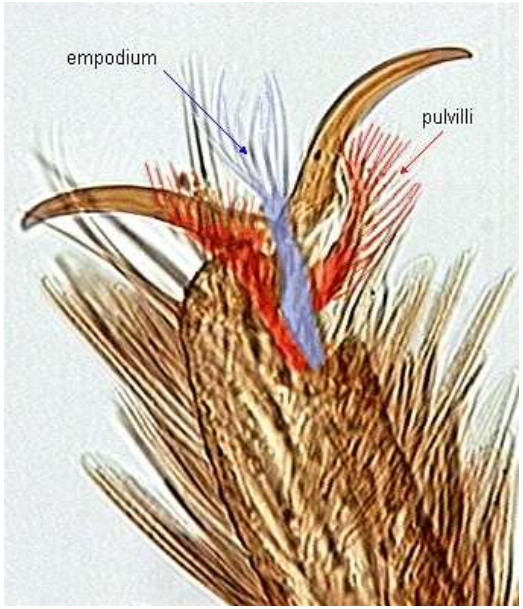


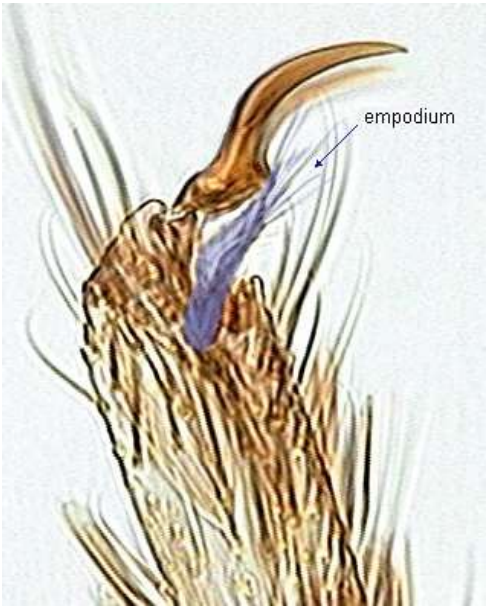
Aedes, Aedimorphus, Acertomyia, Dahliana, Ochlerotatus, Stegomyia

Ergin-Dişi Teşhis Anahtarı





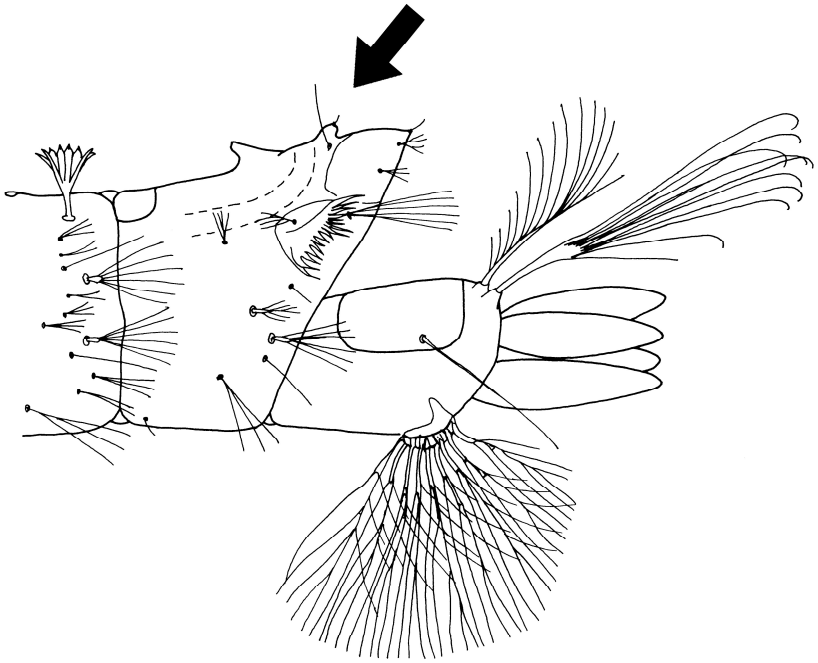




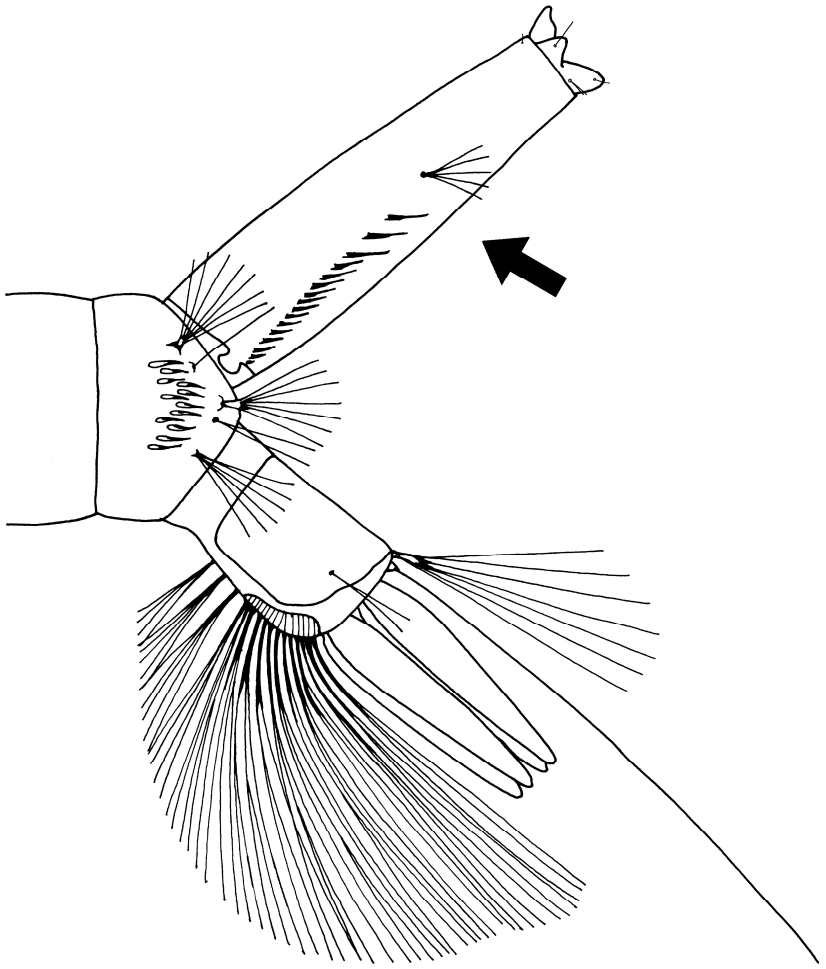
Culex

Coquillettidia

Larva Teşhis Anahtarı



Anopheles



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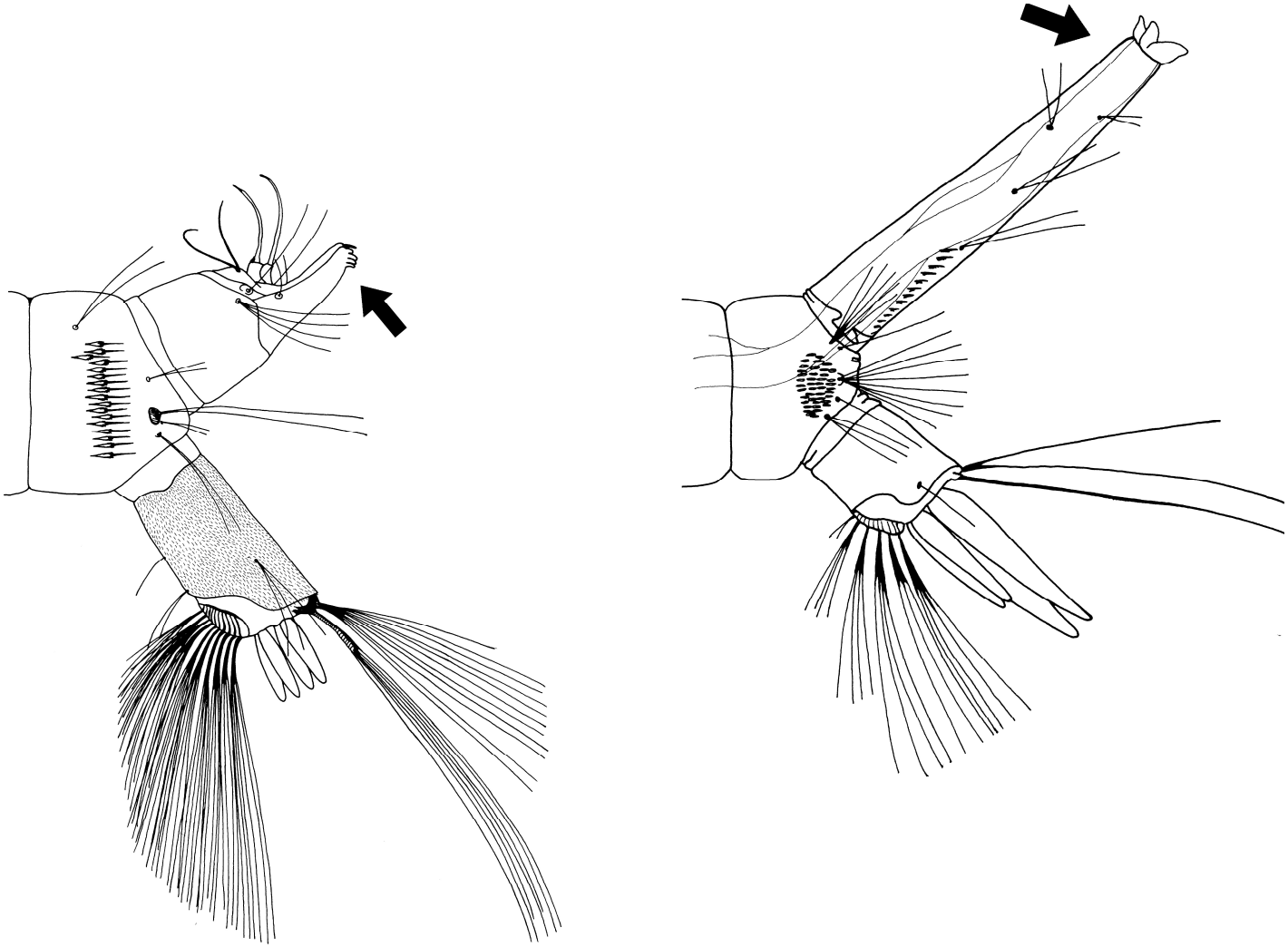
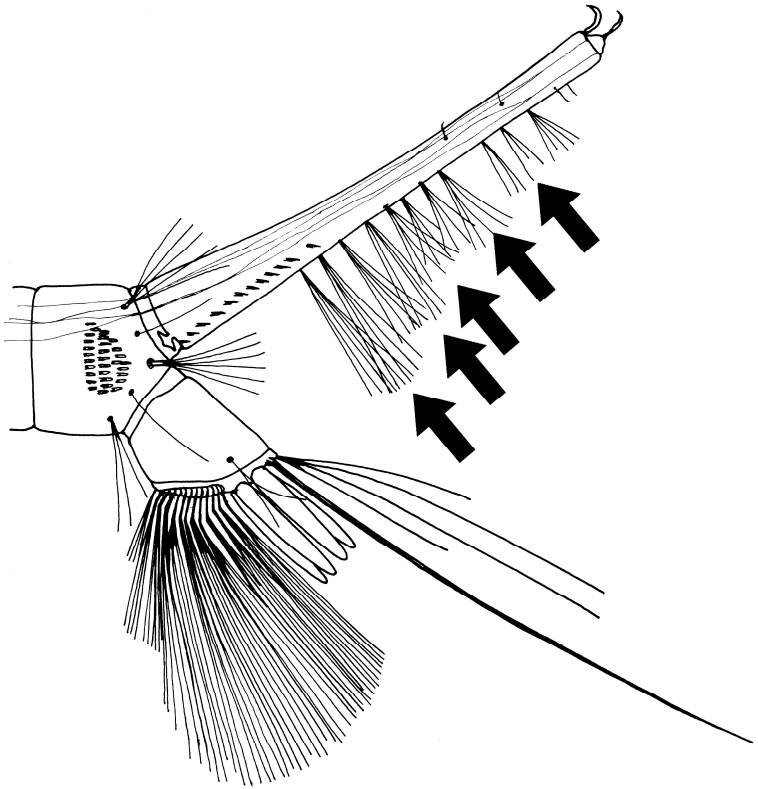
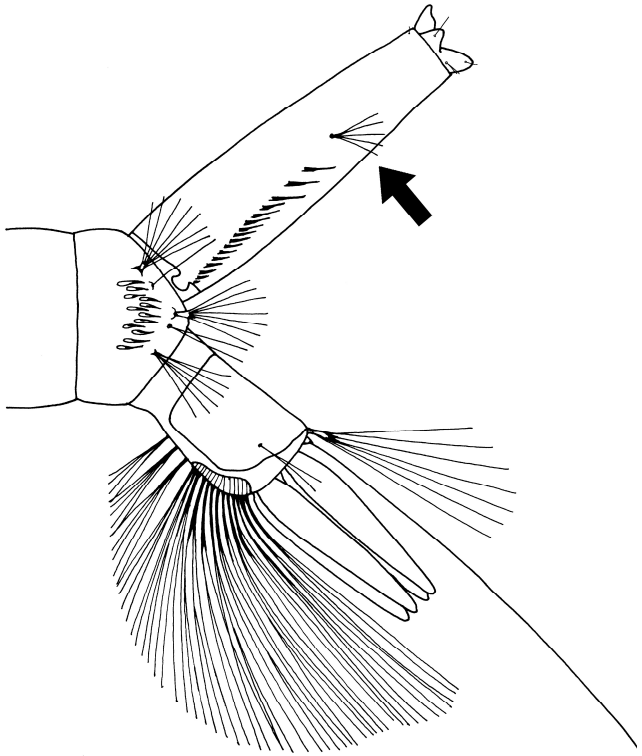


Coquillettidia

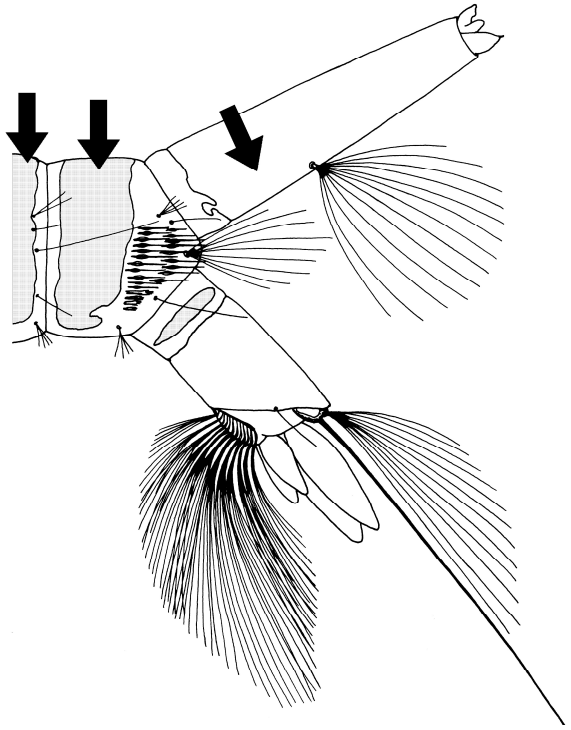
Larva Teşhis Anahtarı

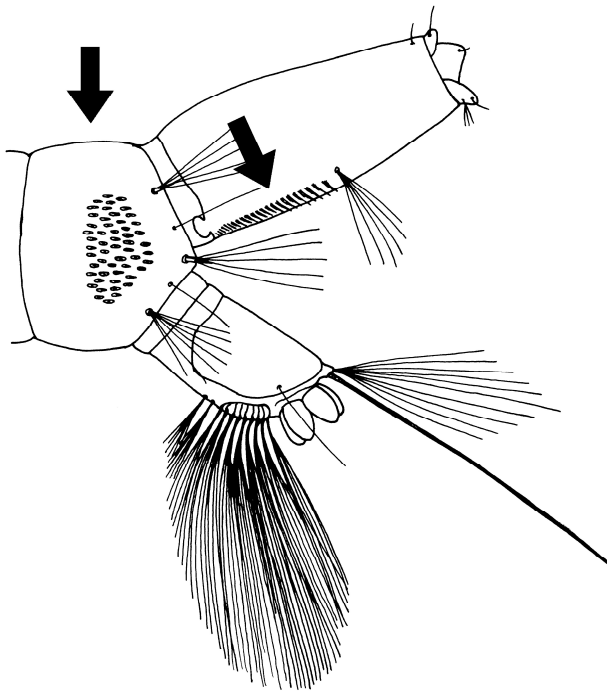




Culex

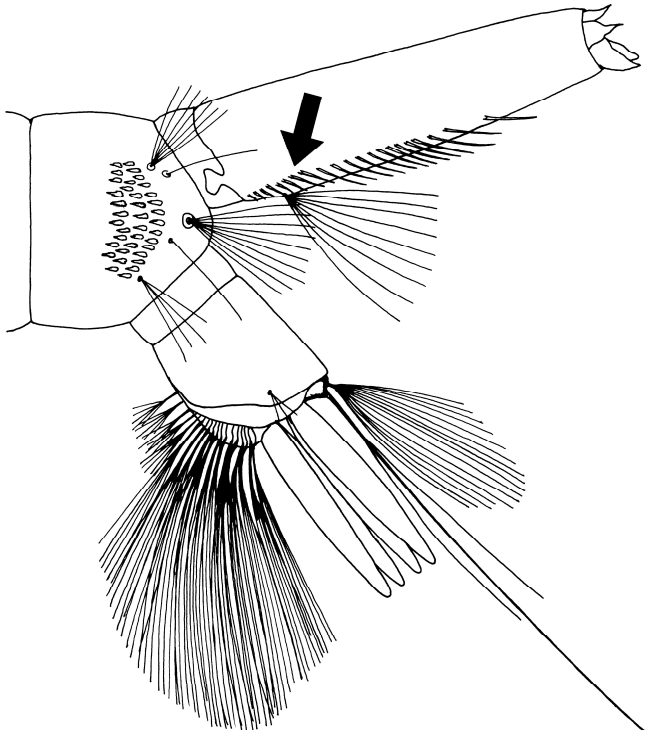
Larva Teşhis Anahtarı

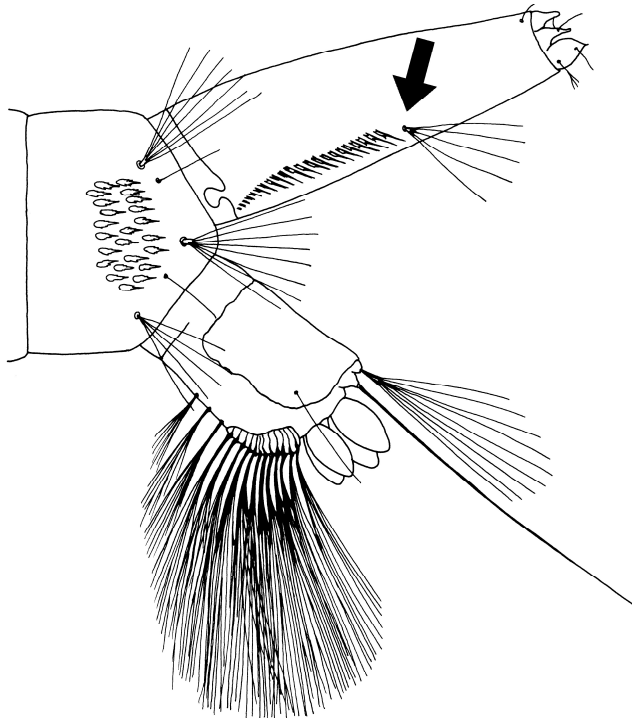




Orthopodomyia pulcripalpis

Larva Teşhis Anahtarı





Culiseta

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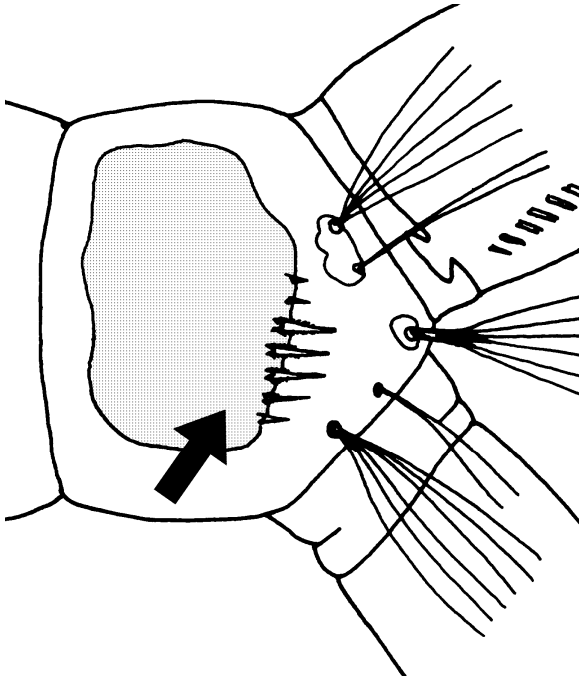
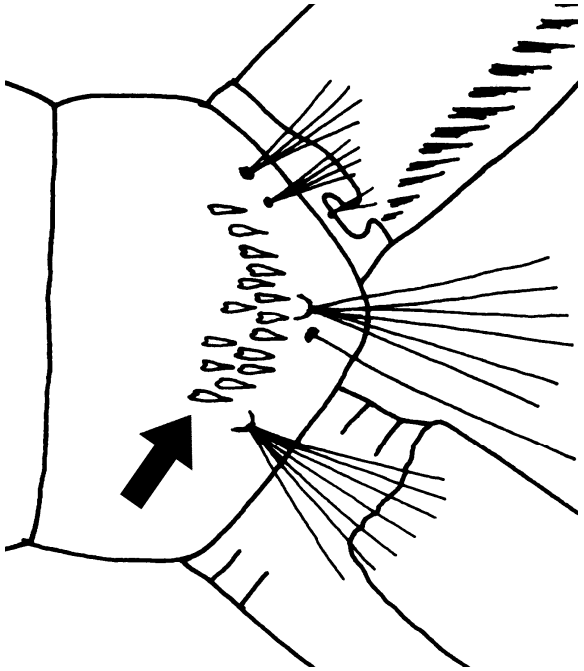


Uranotaenia unguiculata



Aedes, Aedimorphus, Acertomyia, Dahliana, Ochlerotatus, Stegomyia

Teşekkürler

Kaynaklar

- https://www.tes.com/lessons/gaDcfgFDsb0v_Q/insect-anatomy
- https://www.nzherald.co.nz/lifestyle/news/article.cfm?c_id=6&objectid=11590839
- http://japan-culture.biz/painless-injections-718.html
- https://tr.wikipedia.org/wiki/B%C3%B6cek#/media/Dosya:Fly_in_GSCAS.jpg
- https://www.wikiwand.com/tr/B%C3%B6cek
- https://tr.wikipedia.org/wiki/Sivrisinek#/media/Dosya:Aedes_aegypti_during_blood_meal.jpg
- https://dynatrap.com/how-mosquitoes-suck-your-blood/
- https://www.cdc.gov/mosquitoes/pdfs/CulexLifeCycle_508.pdf
- http://entnemdept.ufl.edu/creatures/aquatic/southern_house_mosquito.htm
- https://www.cdc.gov/mosquitoes/pdfs/AedesLifeCycle_508.pdf
- https://www.ecdc.europa.eu/en/disease-vectors/facts/mosquito-factsheets/aedes-albopictus
- https://www.ecdc.europa.eu/en/disease-vectors/facts/mosquito-factsheets/aedes-triseriatus