

Metazoa (Vielzellige Tiere)

Parazoa (Schwämme)

keine echten Epithelien; keine Nervenzellen.
Ei- und Samenzellen; Kragengeißelzellen;
Muskelzellen; u.a.

Eumetazoa (echte Vielzeller; Gewebetiere)

echtes Epithelgewebe; Nervenzellen

Radiärsymmetrische Tiere (z.B. Nesseltiere)

Bilateria (alle höheren Tierstämme)

Stamm: Cnidaria (Nesseltiere)

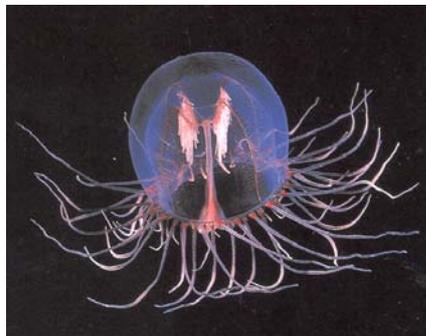
(ehemals „Coelenterata“ Hohltiere zusammen mit Ctenophora- Rippenquallen)

Ca. 9000 rezente Arten

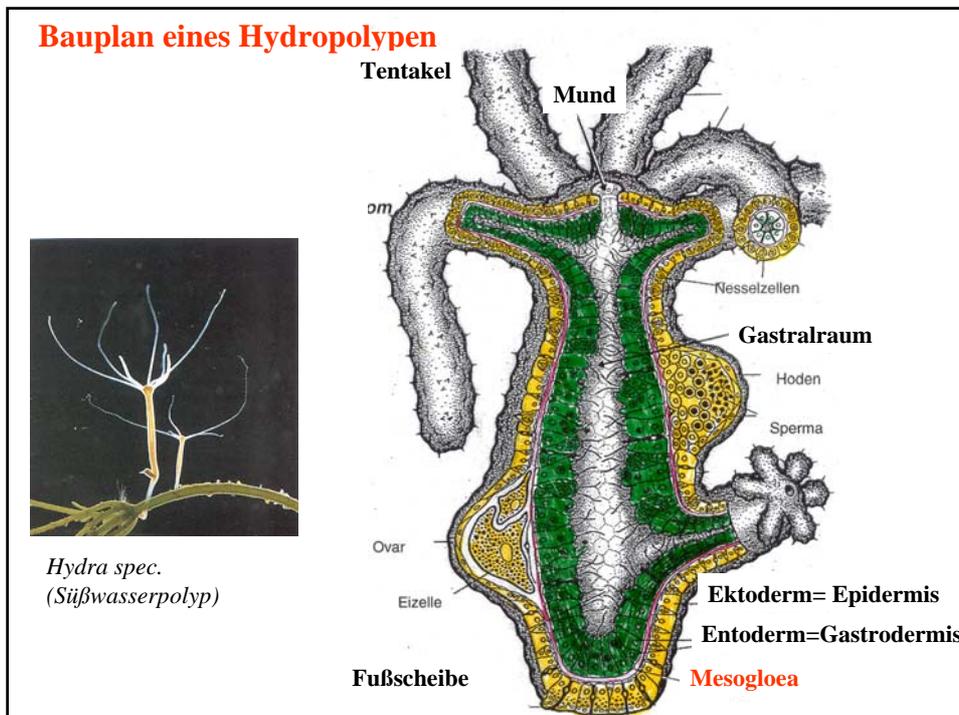
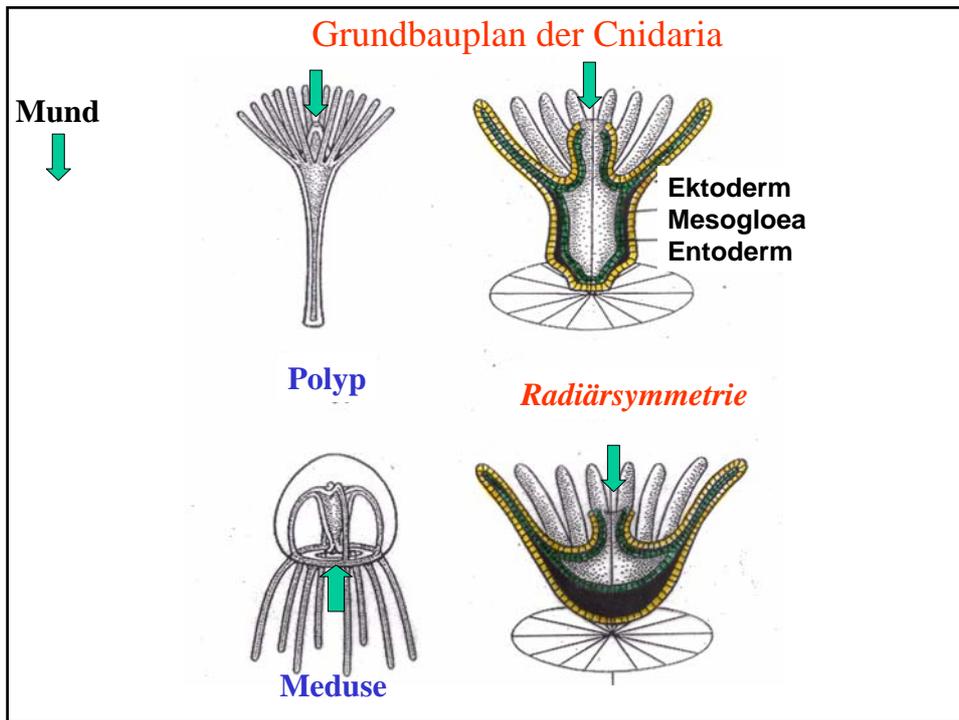
- | | |
|--------------------|------------------------------------------|
| - Radialsymmetrie | Klasse: Hydrozoa |
| - 2 Keimblätter | Klasse: Scyphozoa (Fahnenquallen) |
| - Echte Epithelien | Klasse: Cubozoa (Würfelquallen) |
| - Nesselzellen | Klasse: Anthozoa (Korallen) |

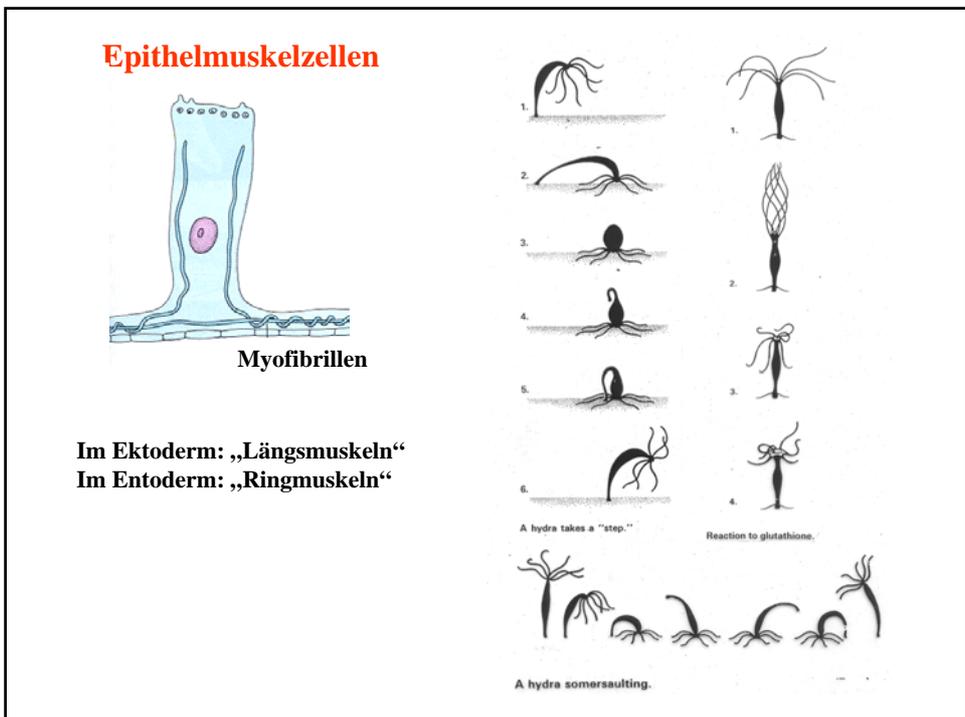
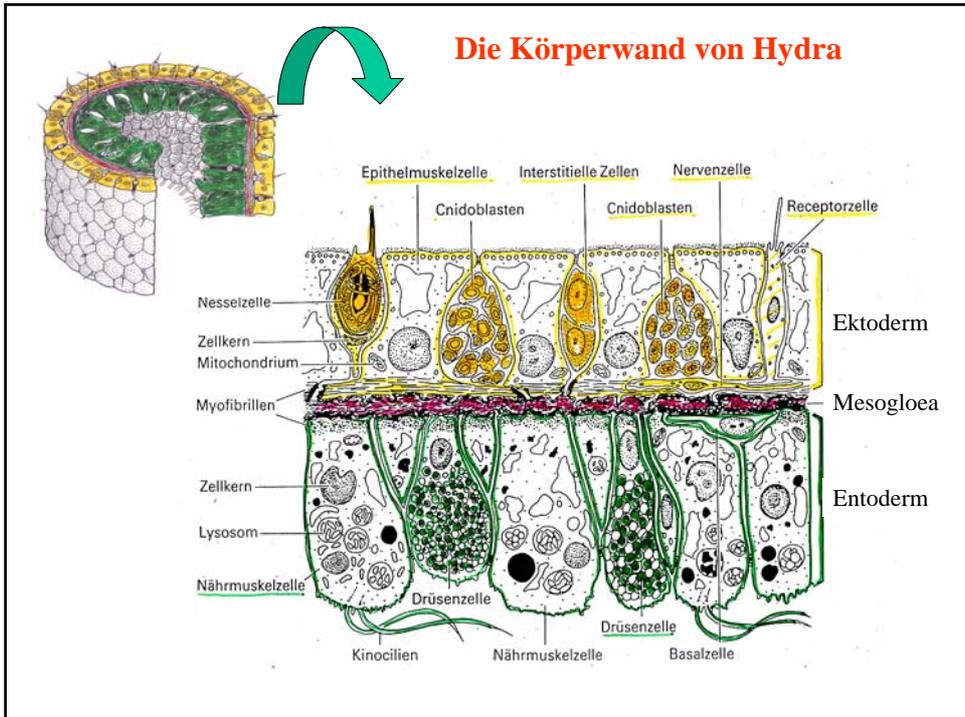


Polyp



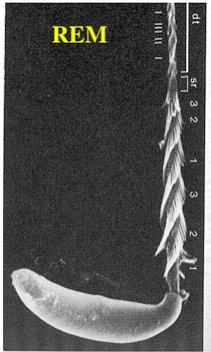
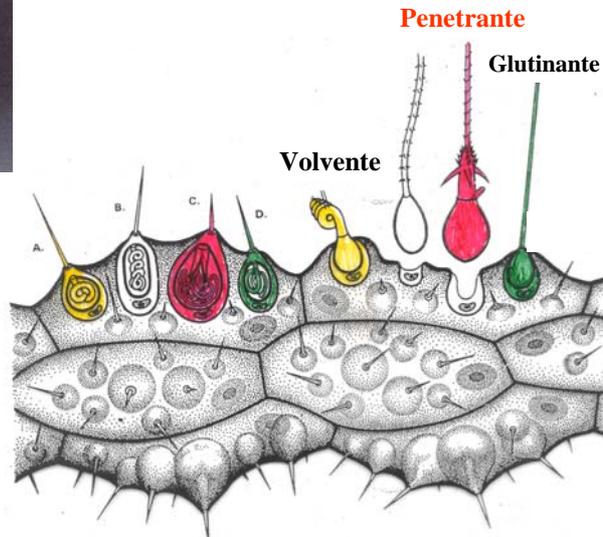
Meduse



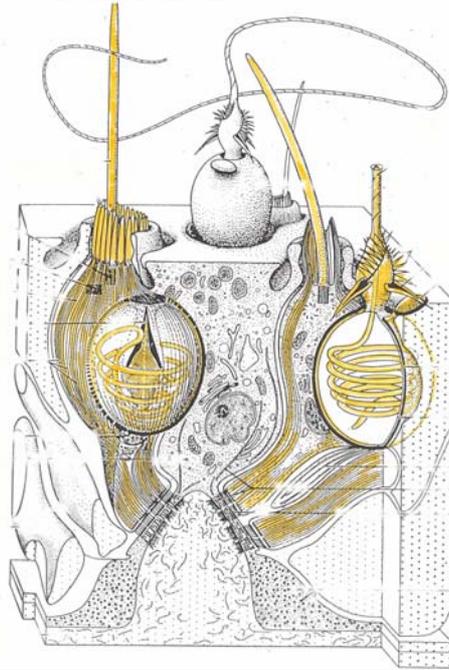




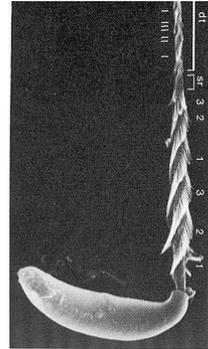
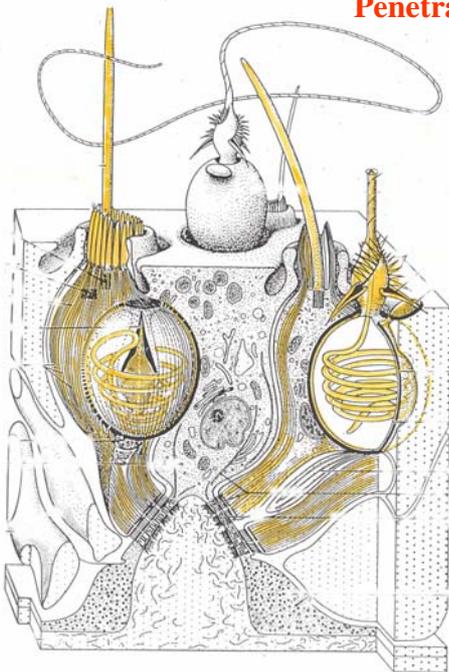
Nesselkapseln (Cniden; Nematocysten)
 = hochspezialisierte Zellorganellen
 der Nesselzellen (Nematocyten; Cnidozyten)



Penetranten

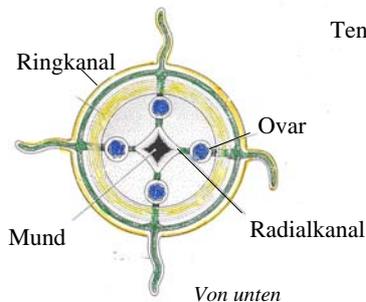
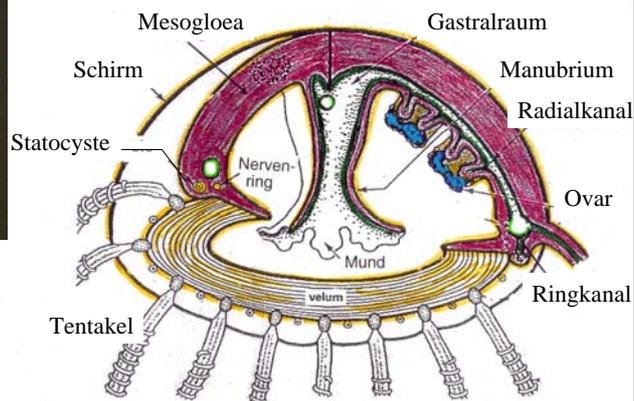
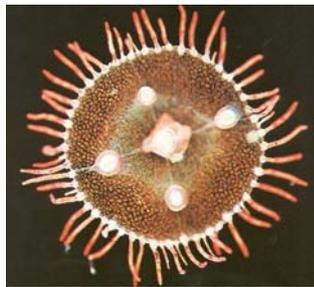


Penetranten

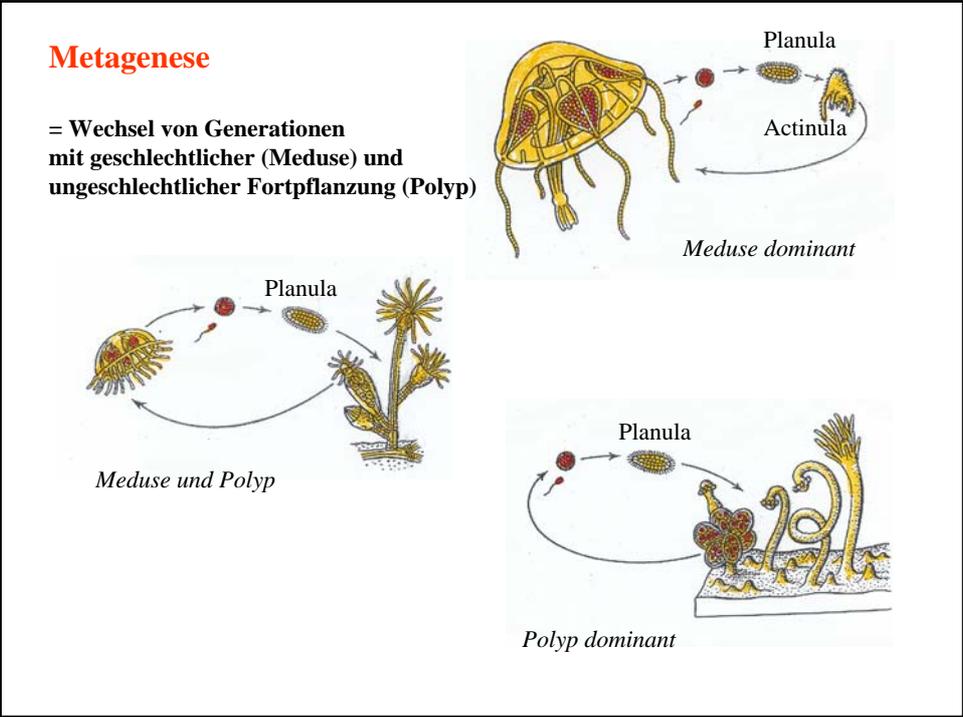
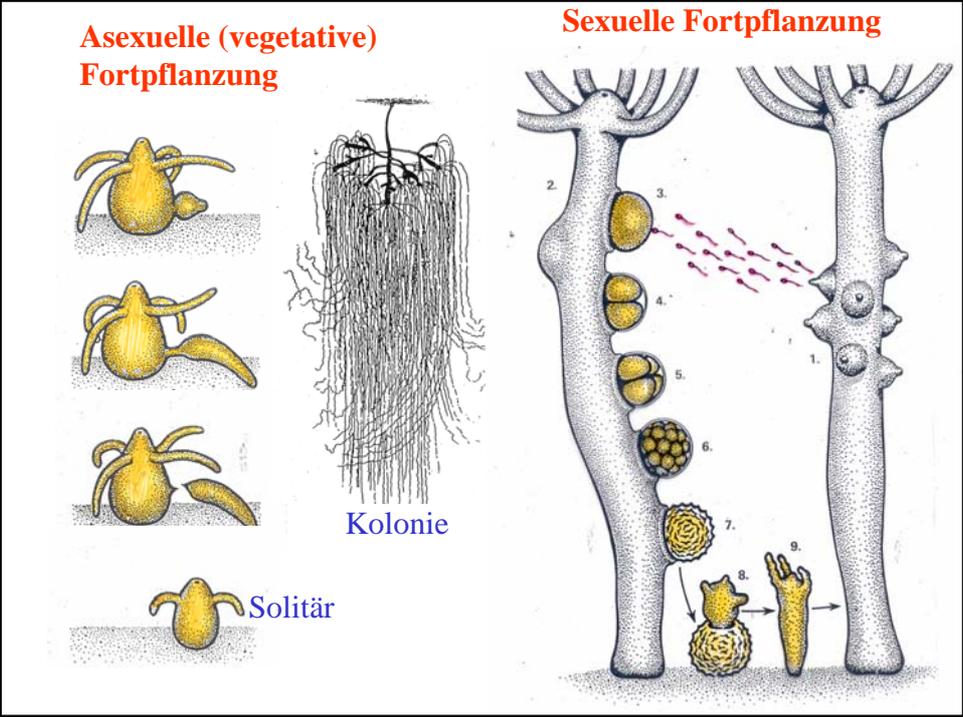


- die komplizierteste tierische Zelle
- Osmotisch hochwirksames Poly-L-Glutamat im Kapselraum bildet „Explosivmasse“
- bei Wassereintritt entsteht ein Druck von 150 bar
- Stilett wird mit Beschleunigung von 40 000 g ausgefahren

Bauplan der Medusen



- verzweigtes Gastrovaskularsystem
- dicke Mesogloea
- Nervenring + diffuses Ns
- Sinnesorgane (Statocysten; manchmal Linsenaugen)
- Velum (muskulöser Ring)



Staatsquallen (Siphonophora)

Schwimmende Tierkolonien mit „Gasflaschen“;
Tentakel aus Achsenfäden mit dransitzenden
Polypen.



Physophora



Portugiesische Galeere

Hochgiftig!! 50 m lange Tentakel

Scyphozoa

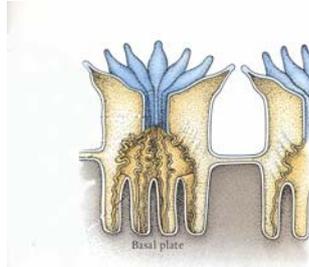


Cotylorhiza tuberculata
(Gelbe Wurzelmundqualle)

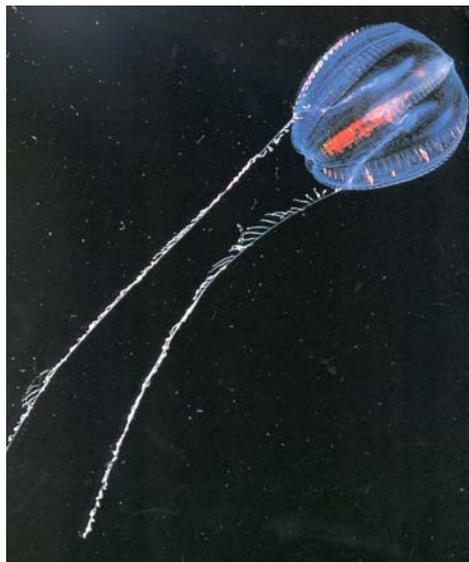


Aurelia aurita (Ohrenqualle)

Anthozoa (Korallen)

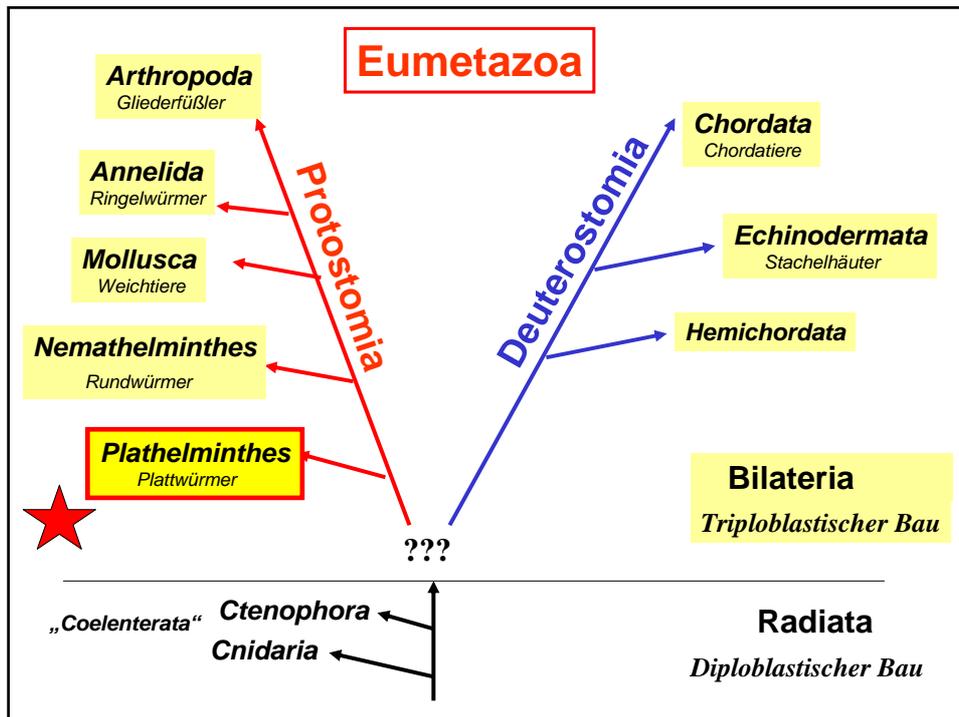


Ctenophora (Rippenquallen)



- Ansätze zu Bilateralsymmetrie
- Keine Nesselzellen, aber
Spez. Colloblasten
- Mesogloea mit Muskelzellen

Früher als „Acnidaria“ mit
Cnidaria zusammen als
Coelenterata (Hohltiere)
zusammengefaßt



Stamm: **Plathelminthes**
(Plattwürmer)

Bilateralsymmetrie
3 Keimblätter
Organe



Klasse: **Turbellaria** (Strudelwürmer)

Klasse: **Trematodes** (Saugwürmer)

Klasse: **Cestodes** (Bandwürmer)

Leibeshöhle mit Mesenchym gefüllt = **parenchymatöse Acölomata**

After, Blutgefäße und spezielle Atmungsorgane fehlen

Exkretionsorgane sind Protonephridien

Fast immer Zwitter

Stamm: Plathelminthes (Plattwürmer)

Turbellaria



Strudelwürmer

Trematodes

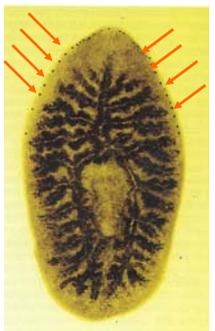
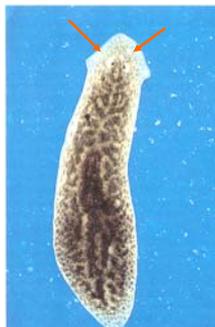


Saugwürmer

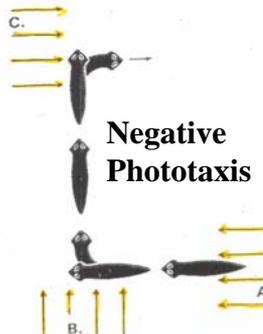
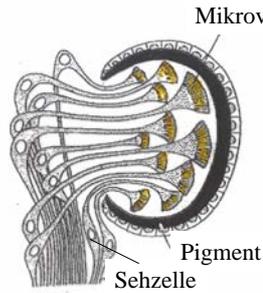
Cestodes



Bandwürmer



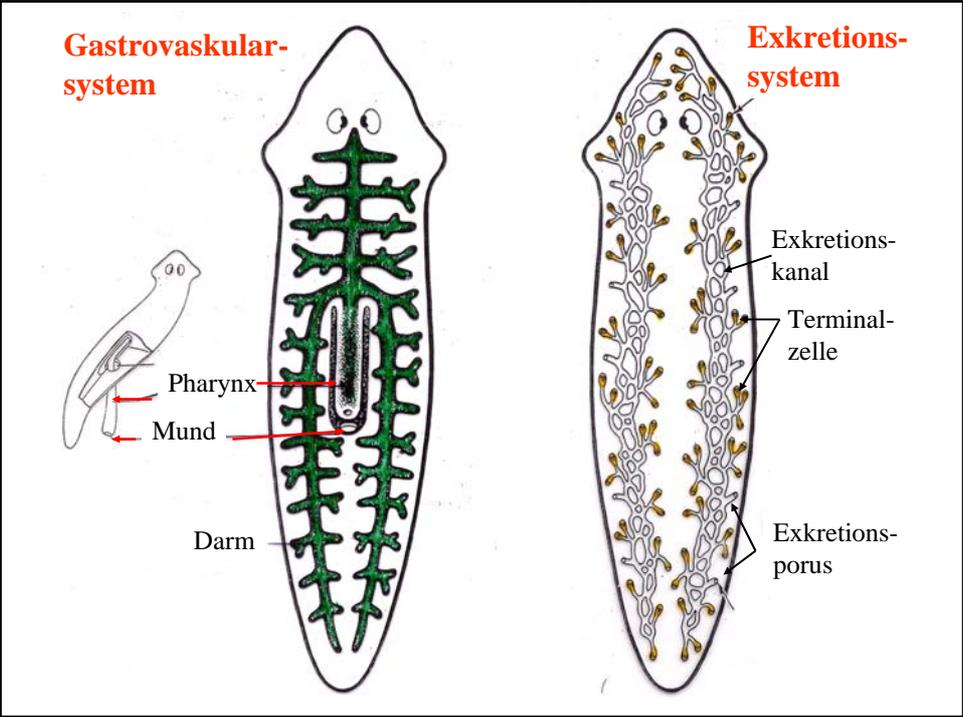
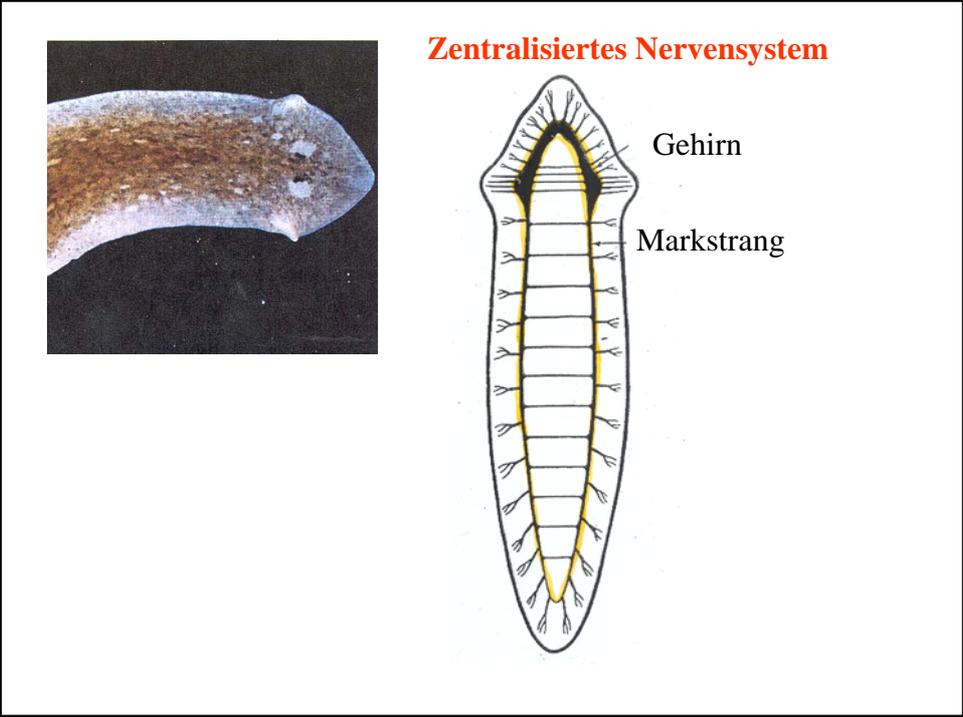
Pigmentbecherocellus

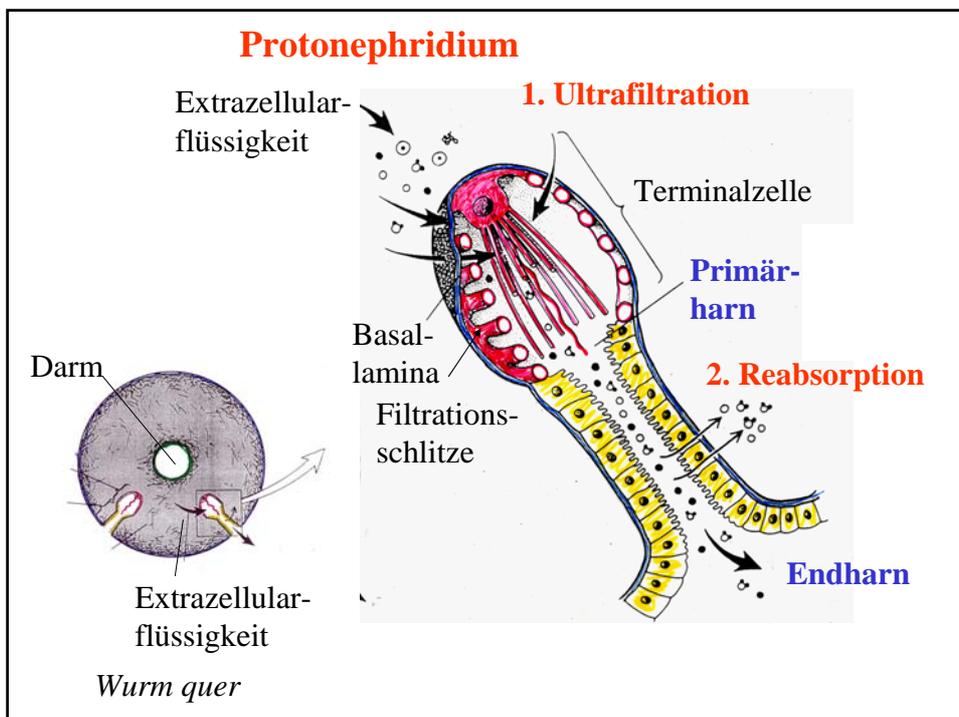
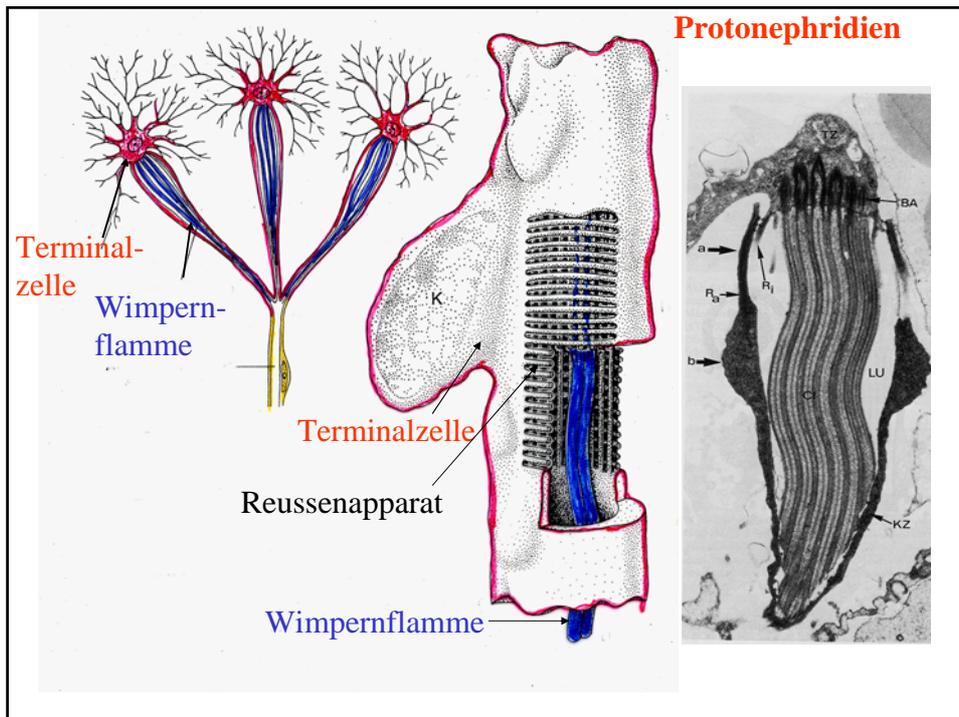


Turbellaria

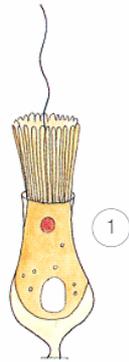
Richtungssehen



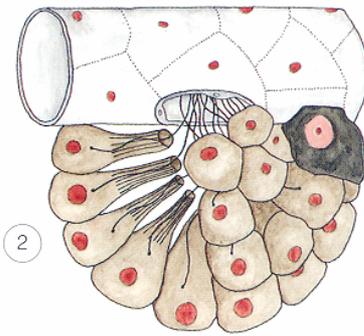




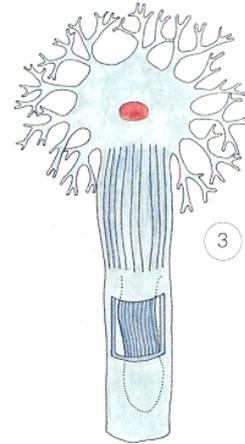
Mögliche evolutive Zusammenhänge



Choanoflagellat

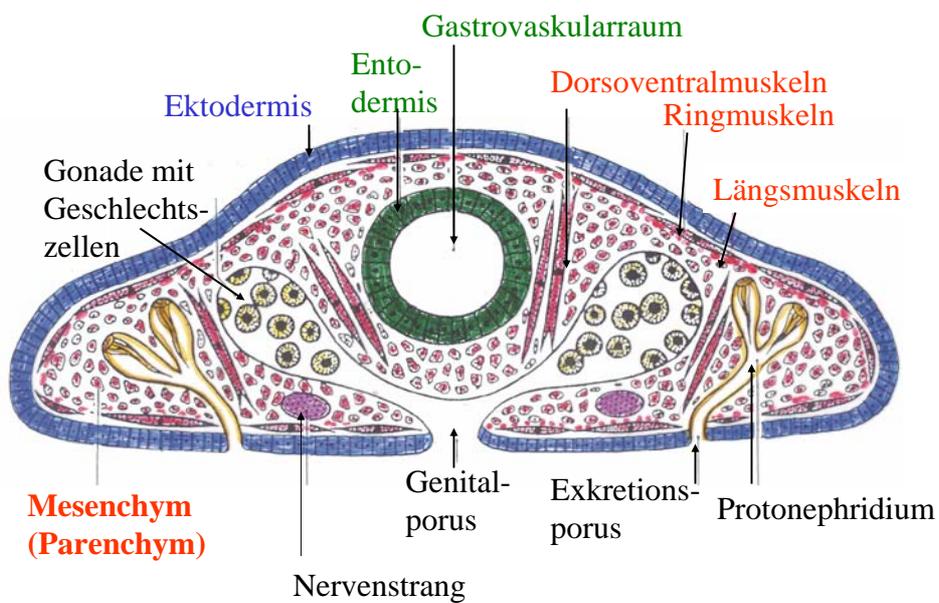


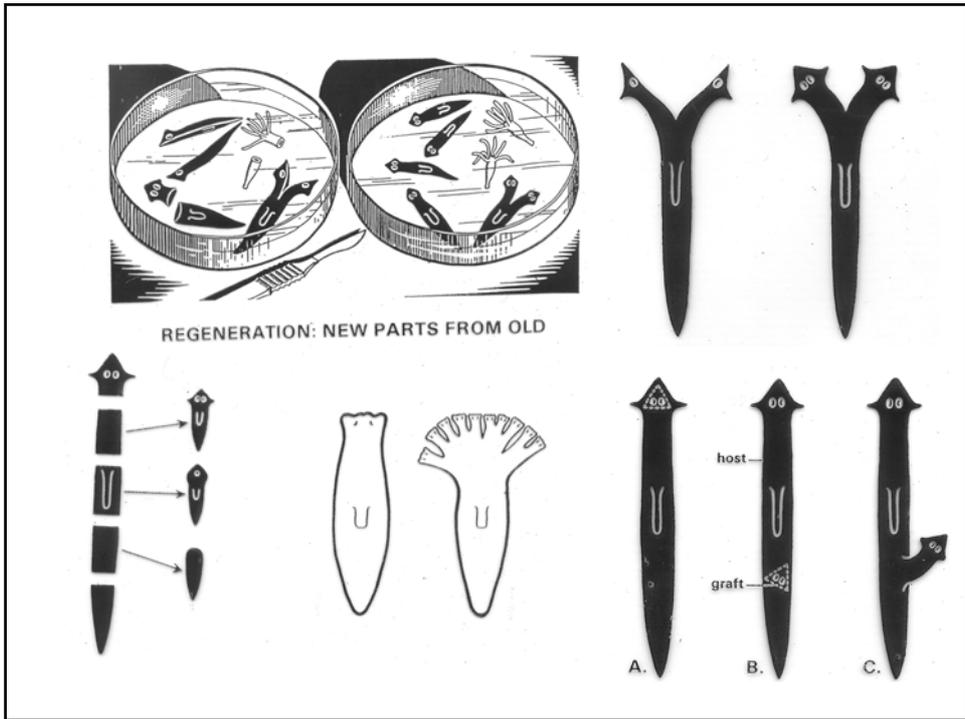
Kragengeißelzellen
Schwämme



Protonephridium

Schematischer Querschnitt durch einen Plathelminthen

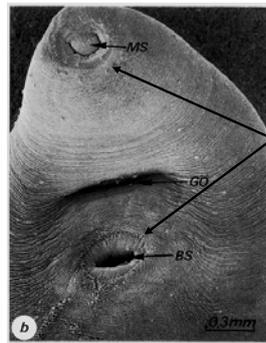




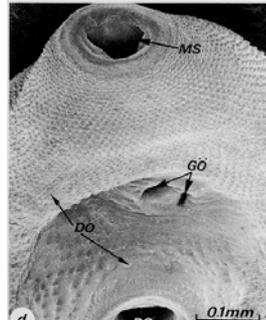
Plathelminthes:
Kl. Trematodes (Saugwürmer)

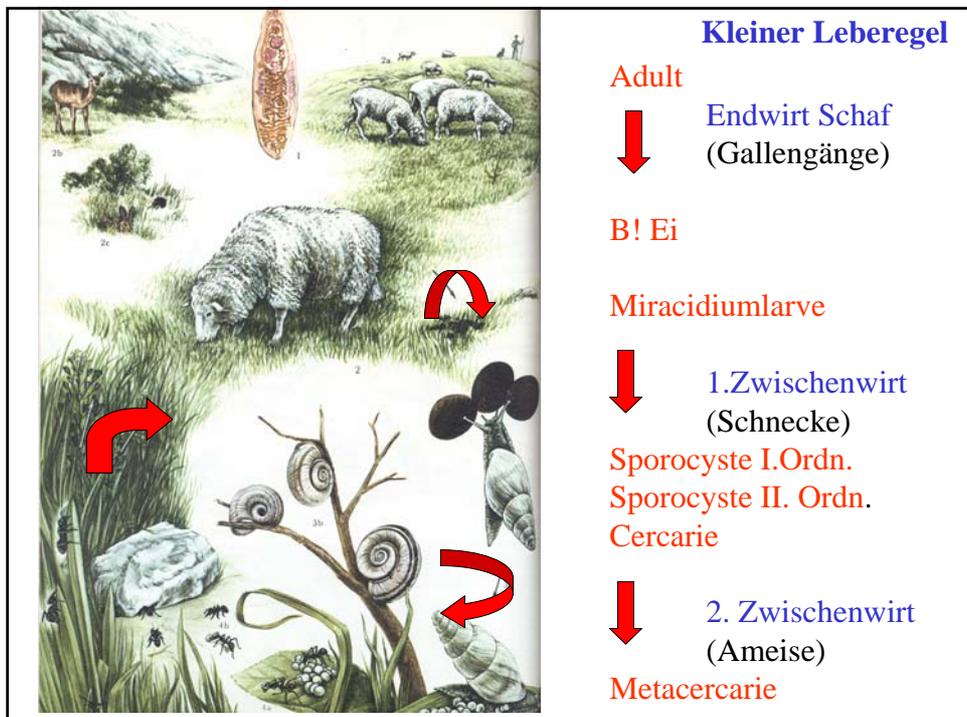
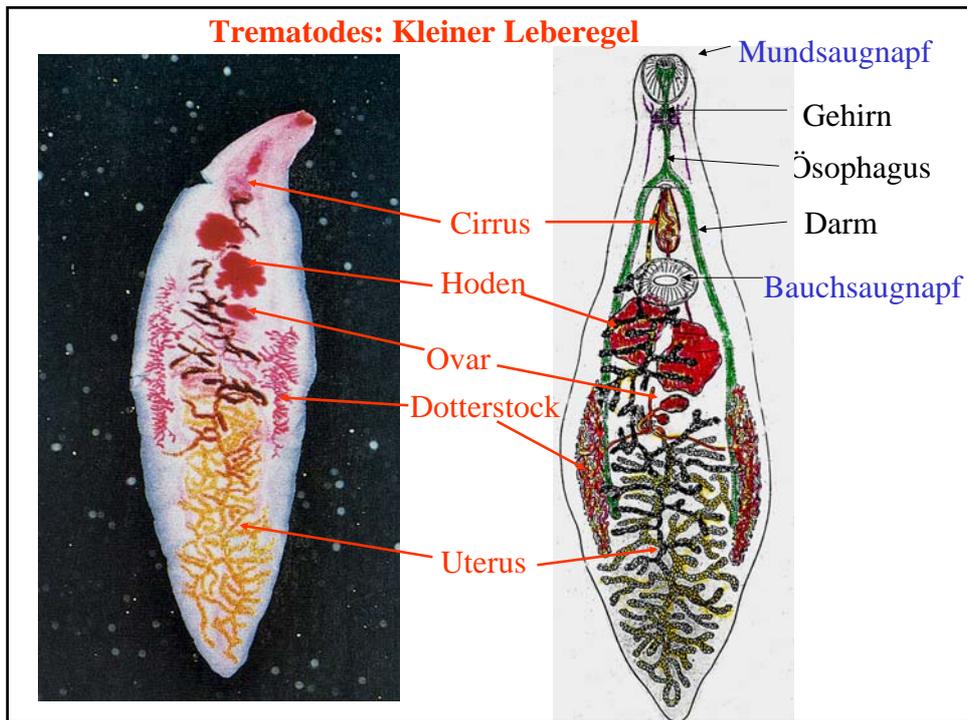


Großer Leberegel (Fasciola hepatica)



Saug-
 näpfe

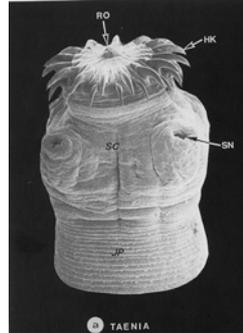




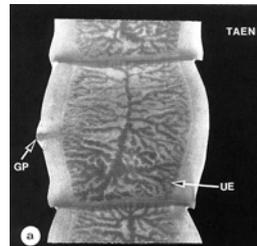
Plathelminthes: **Kl. Cestodes (Bandwürmer)**



Rinderbandwurm (*Taenia saginata*)
Länge: bis zu 10m

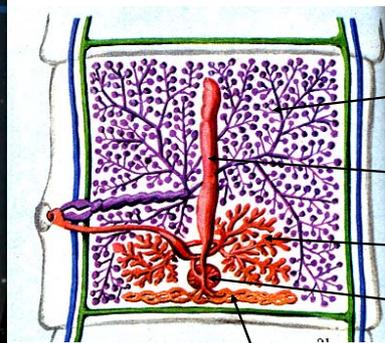


Kopf
(Scolex)



Proglottid

Bau der Bandwurmproglottide



Dotterstock

Hoden

Uterus

Ovar

Receptaculum
seminis

Entwicklungszyklus des Schweinebandwurms (*Taenia solium*)

