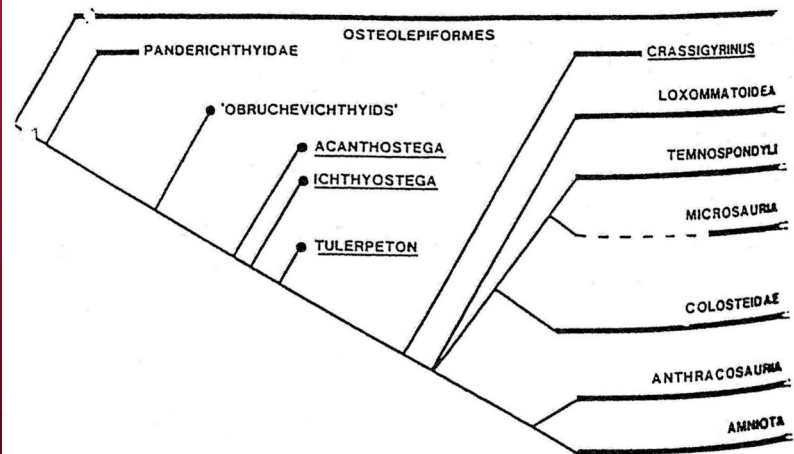
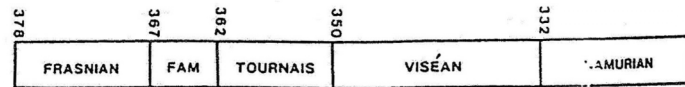
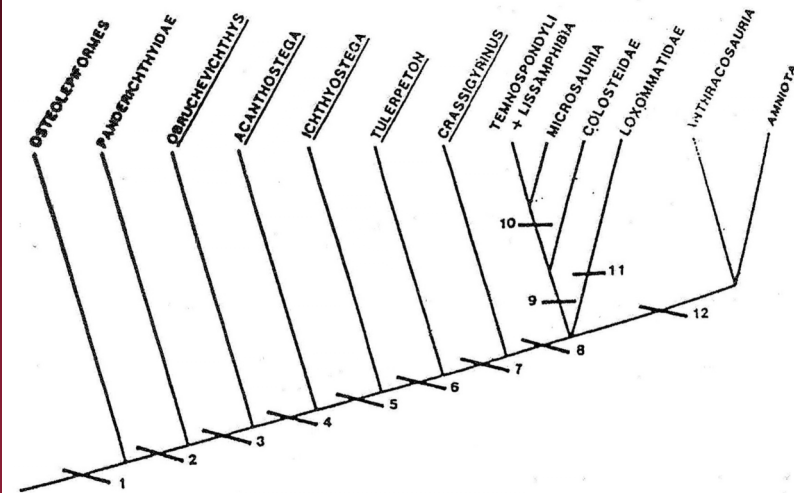
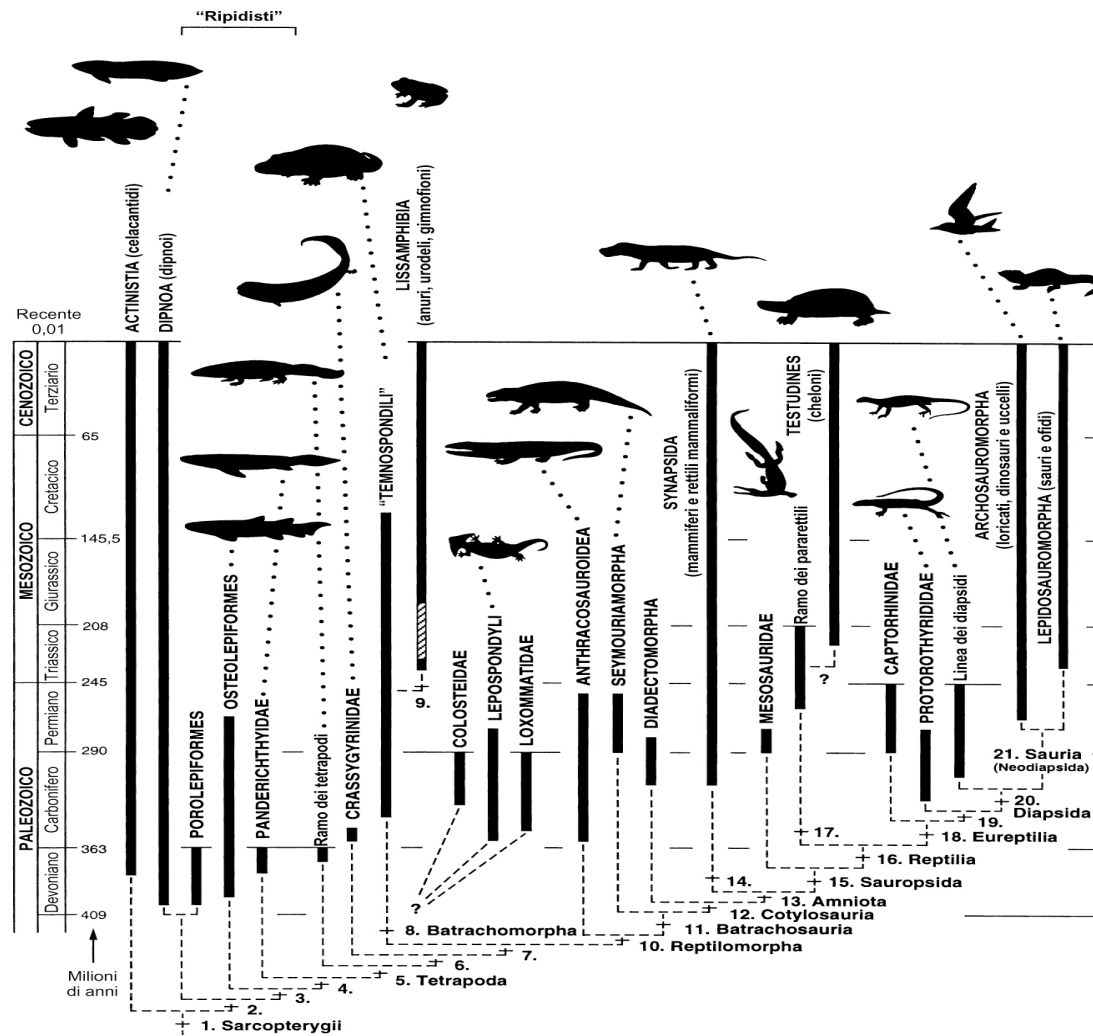
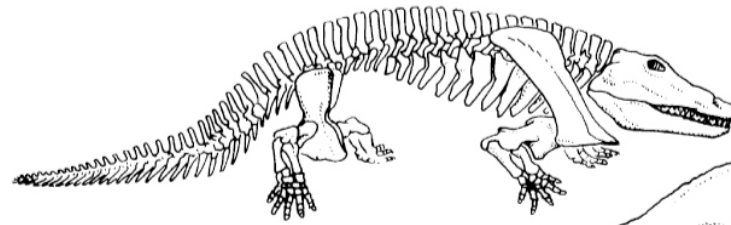
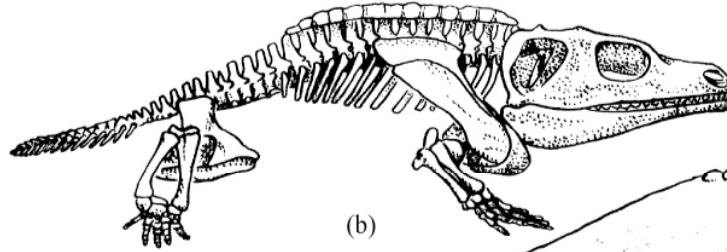




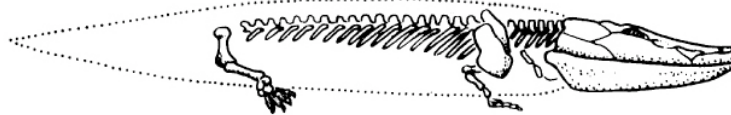
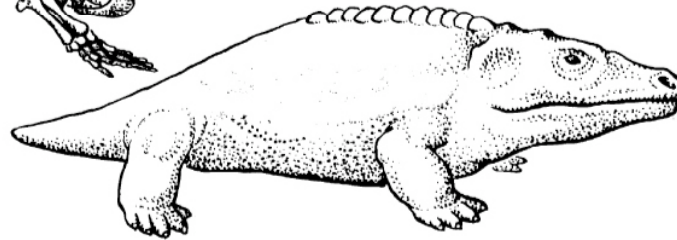




(a)

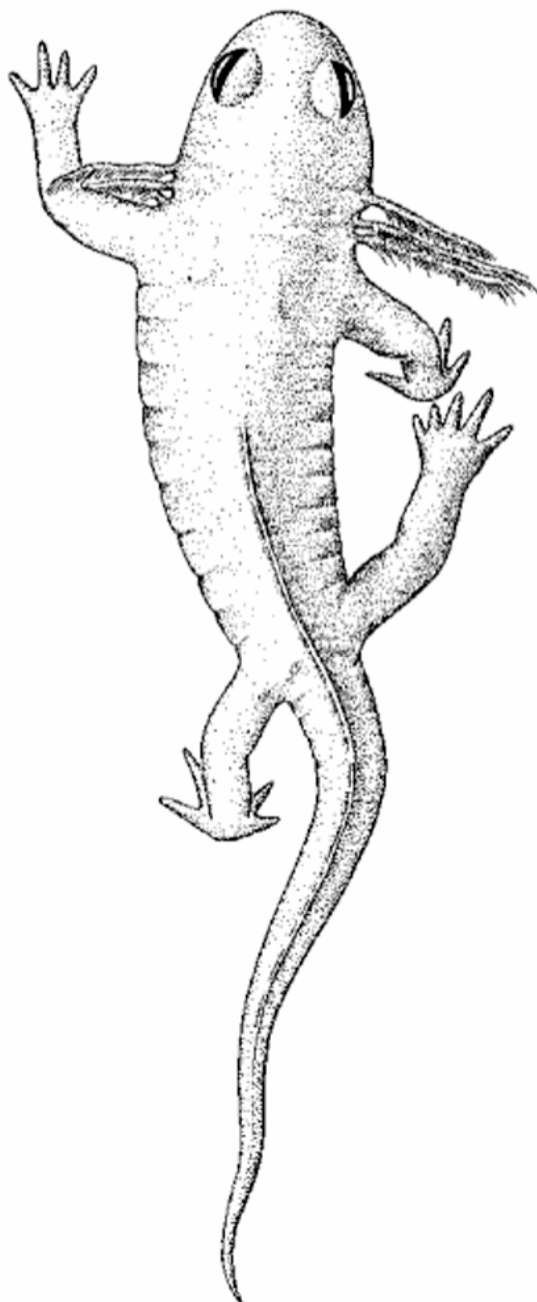


(b)



(c)



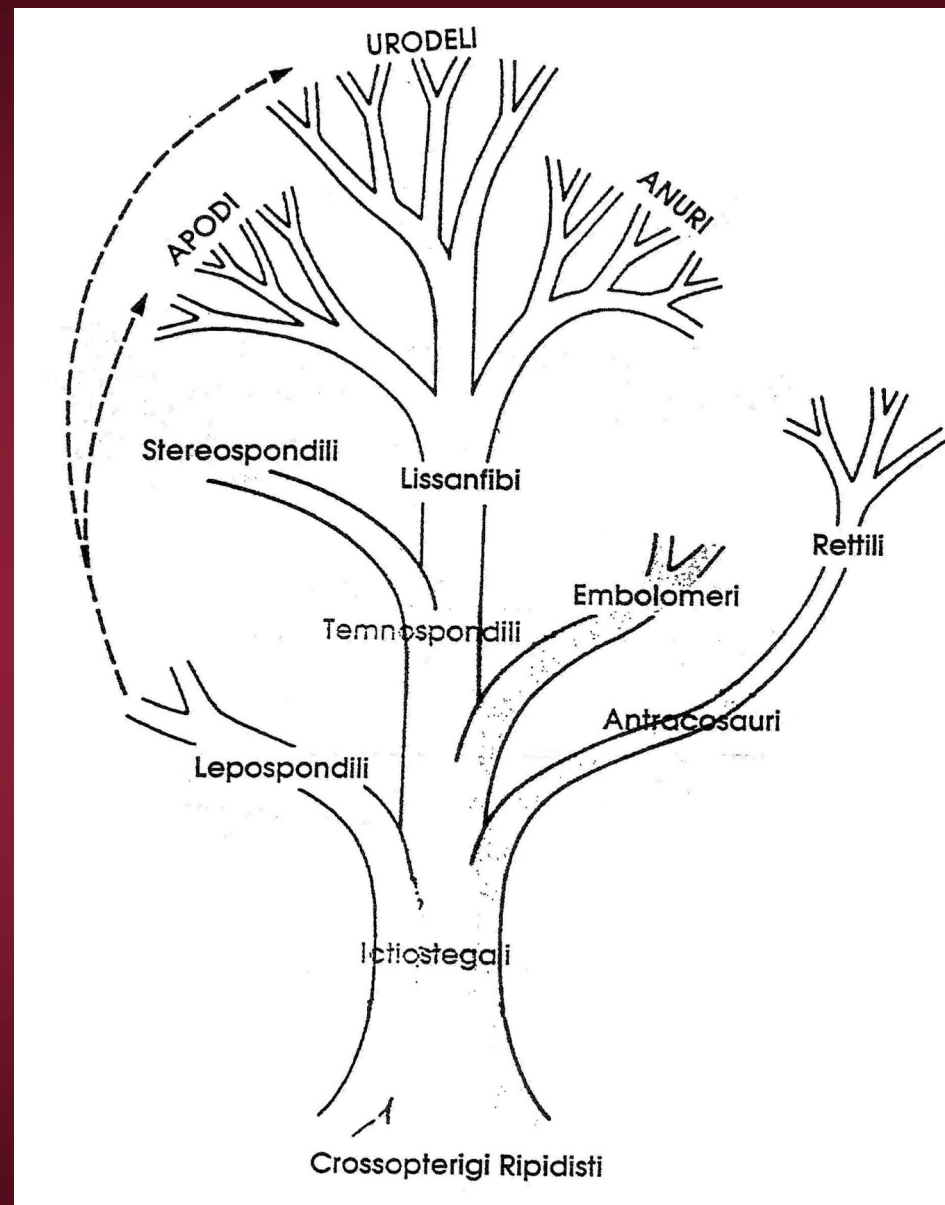


CLASSIFICAZIONE DEGLI ANFIBI

SOTTOCLASSE LEPOSPONDILI

SOTTOCLASSE LABIRINTODONTI (ICTIOSTEGALI,
TEMNOSPONDILI
ANTRACOSAURI)

SOTTOCLASSE LISSANFIBI - ANURI, URODELI,
APODI

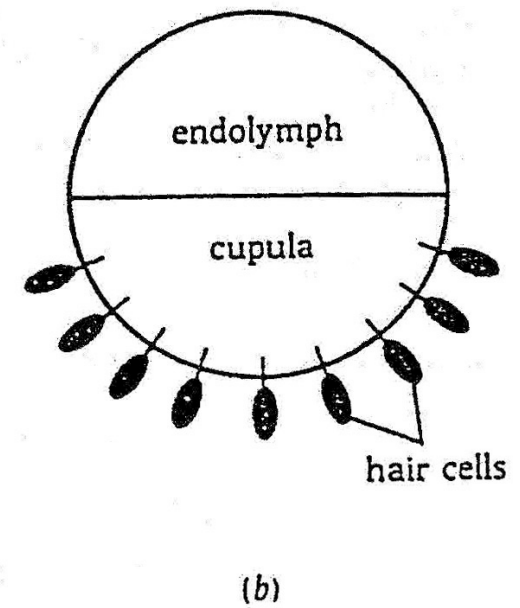
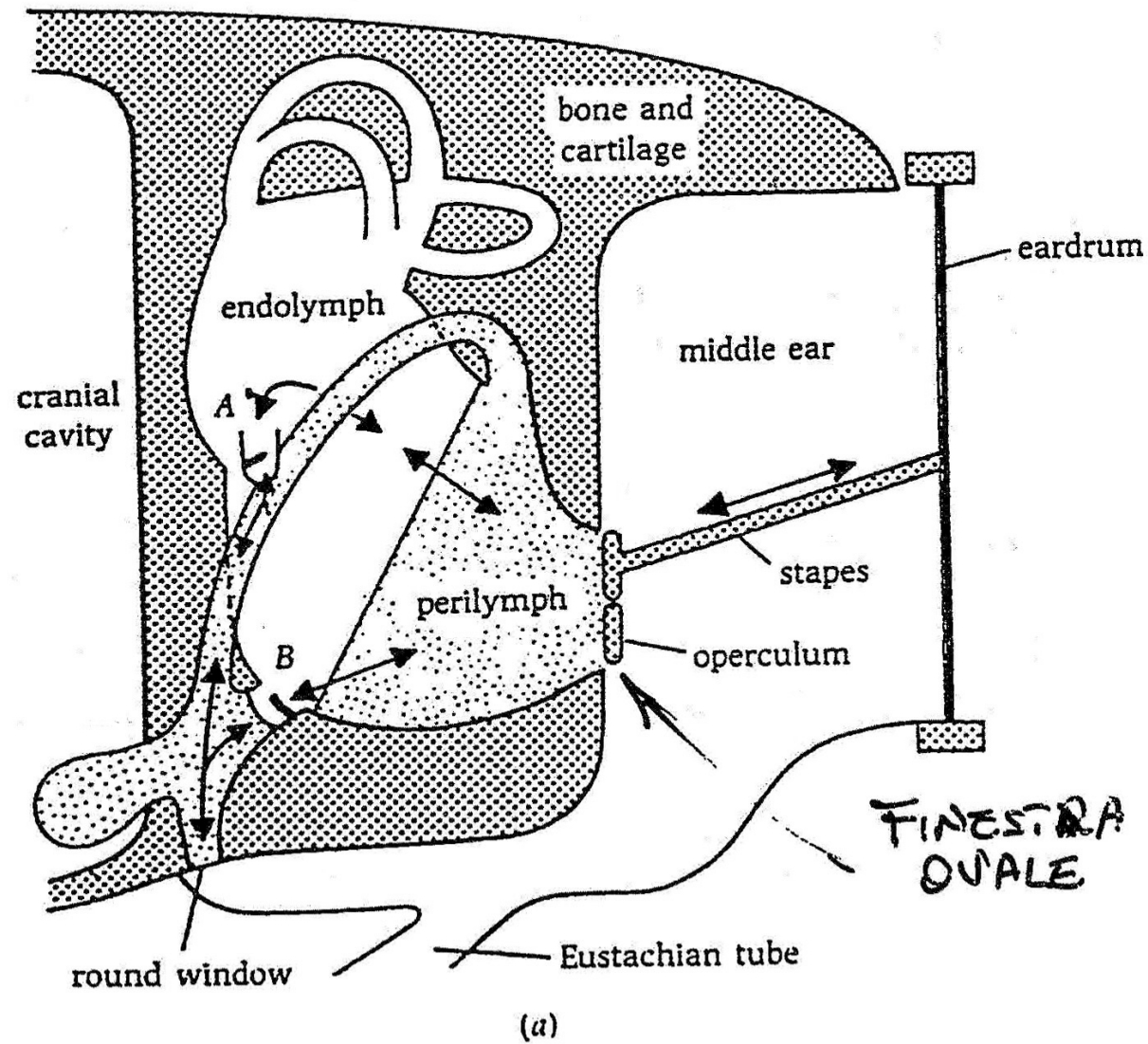


CARATTERISTICHE DEI LISSANFIBI IN COMUNE CON I PESCI

- 1) RESPIRAZIONE BRANCHIALE ALLO STADIO LARVALE (FREQUENTE LA NEOTENIA NEGLI URODELI, ASSENTE NEGLI ANURI)
- 2) PRESENZA DI LINEA LATERALE NELLO STADIO LARVALE E NEGLI URODELI ACQUATICI ADULTI
- 3) UOVA DEPOSTE GENERALMENTE IN ACQUA

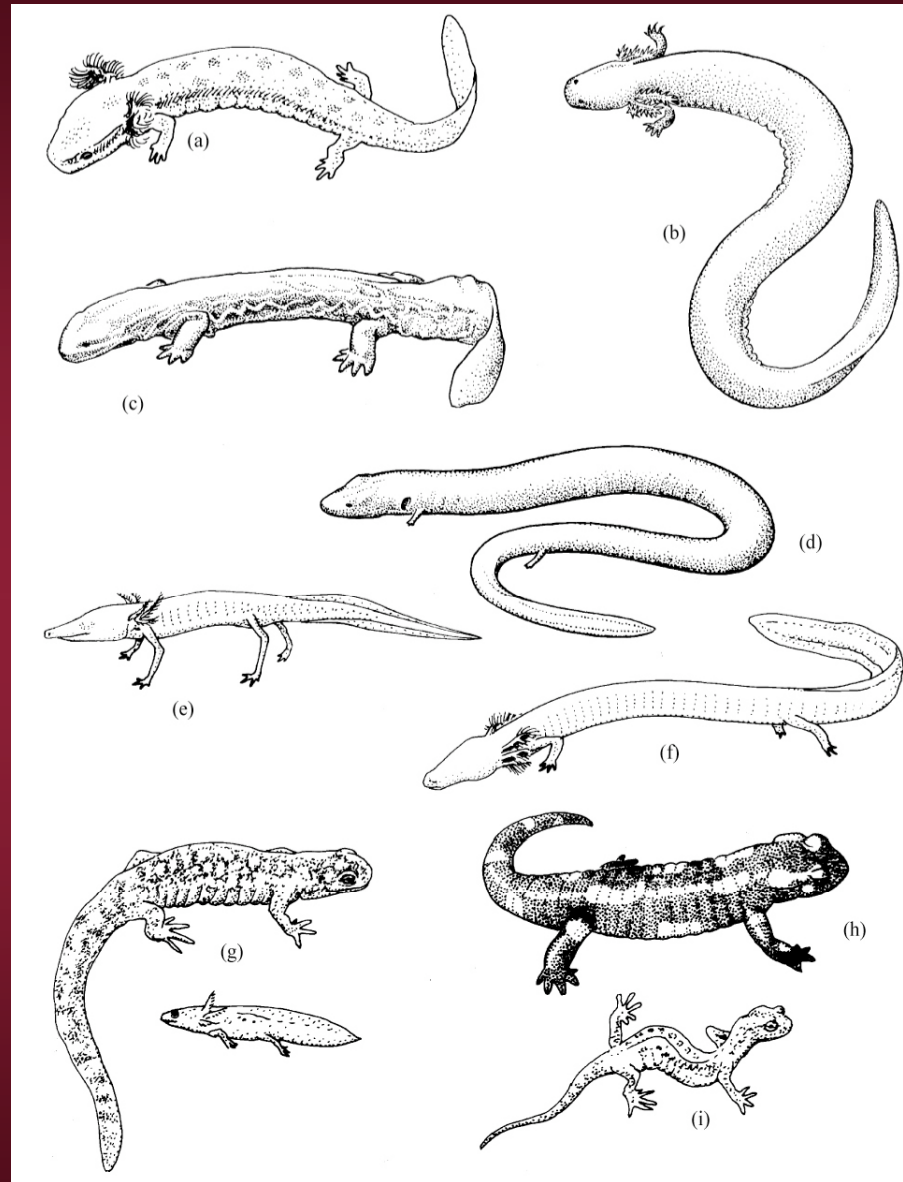
CARATTERISTICHE DIFFERENTI RISPETTO AI PESCI

- 1) PREVALENTEMENTE TERRESTRI DA ADULTI
- 2) ORECCHIO MEDIO CON MEMBRANA TIMPANICA
A COLUMELLA
- 3) PRESENZA DI ARTI (PERSI SUCCESSIVAMENTE NEGLI
APODI ED IN ALCUNI URODELI)
- 4) RESPIRAZIONE POLMONARE E/O TEGUMENTALE

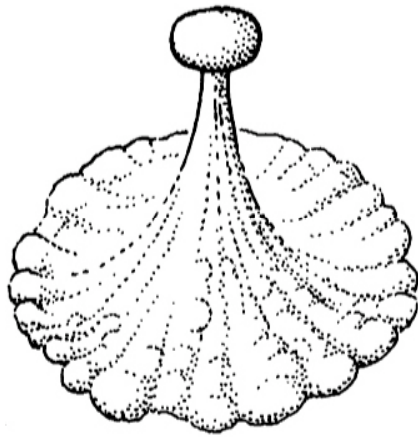


URODELI

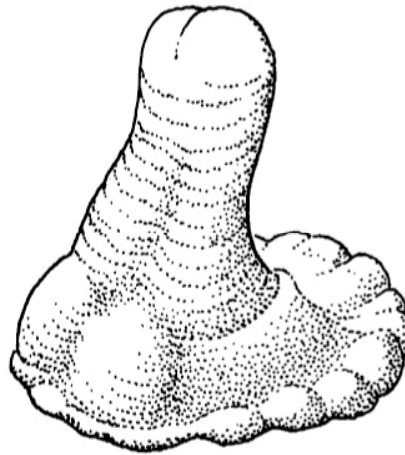
- HANNO LA CODA
- MOVIMENTO PISCIFORME
- BRANCIE ESTERNE
- LINEA LATERALE
- SCHELETRO PREVALEMENTEMENTE CARTILAGINEO
- FECONDAZIONE INTERNA (SPERMATOFORE)
- GHIANDOLE EDONISTICHE
- GENERALMENTE CON QUATTRO ARTI



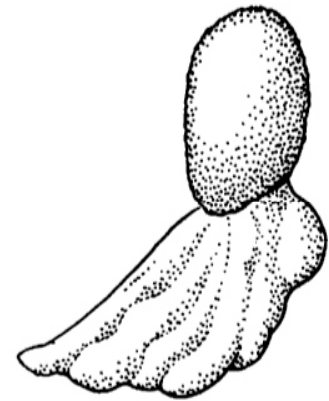
Spermatofore



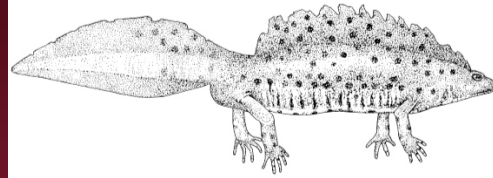
(a)



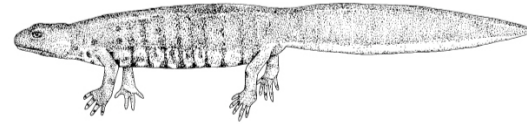
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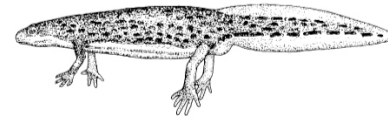
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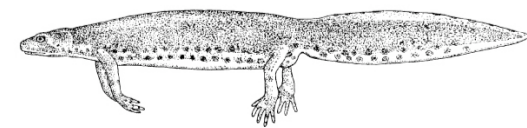
(a)



(b)



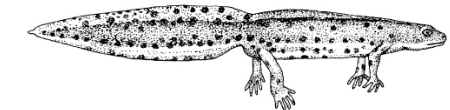
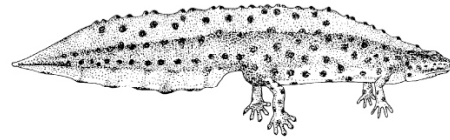
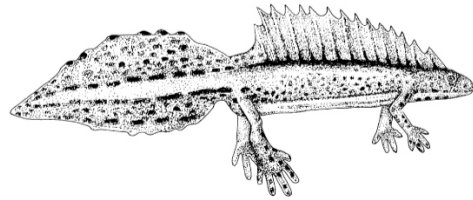
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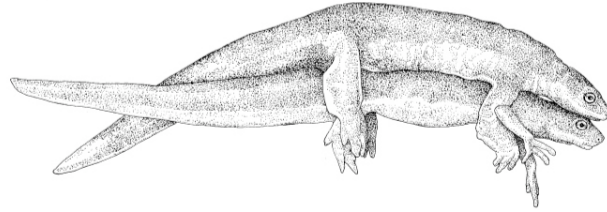
(d)



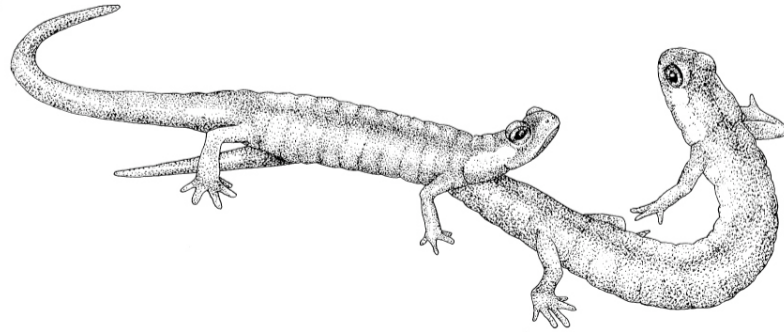
(e)



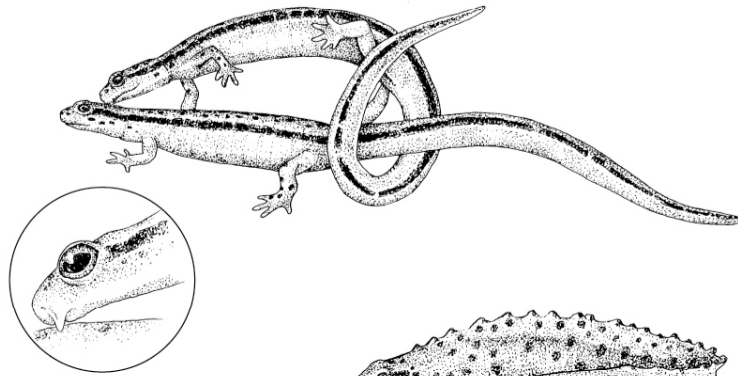
(a)



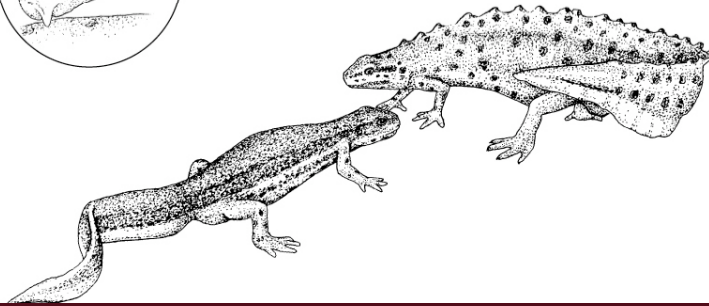
(b)

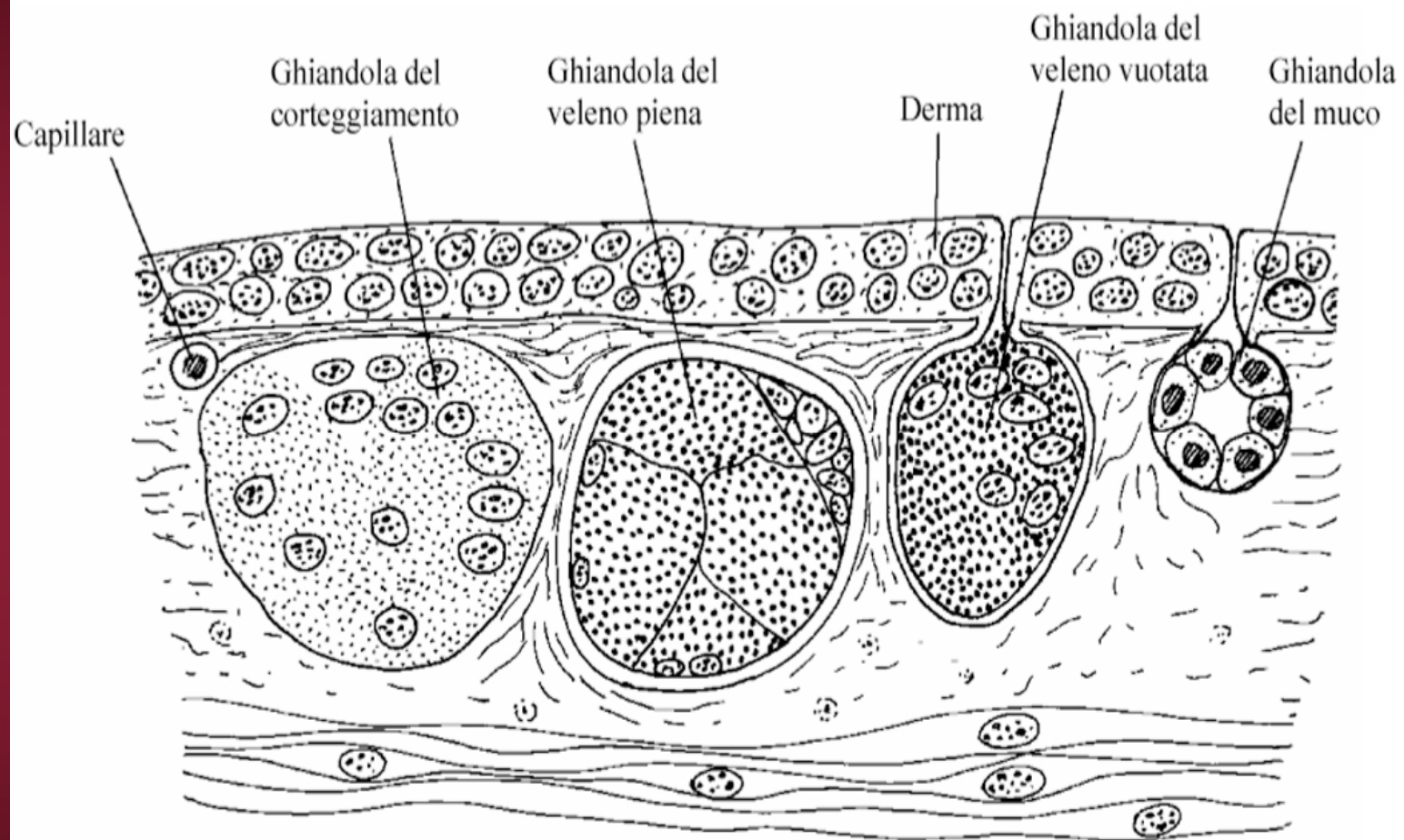


(c)

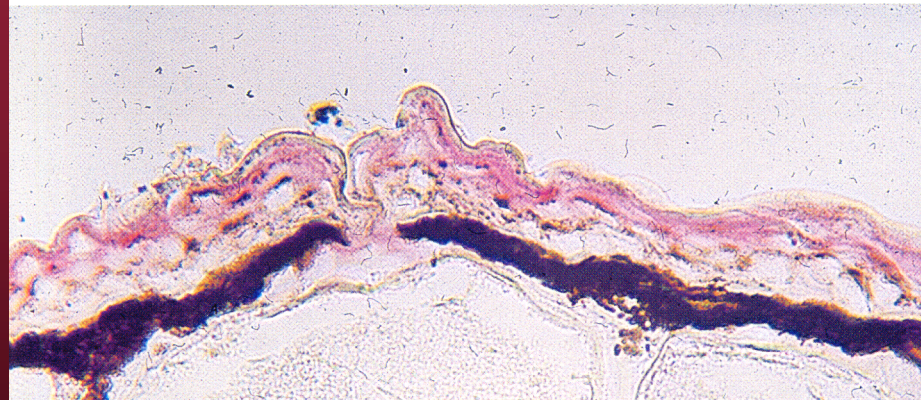
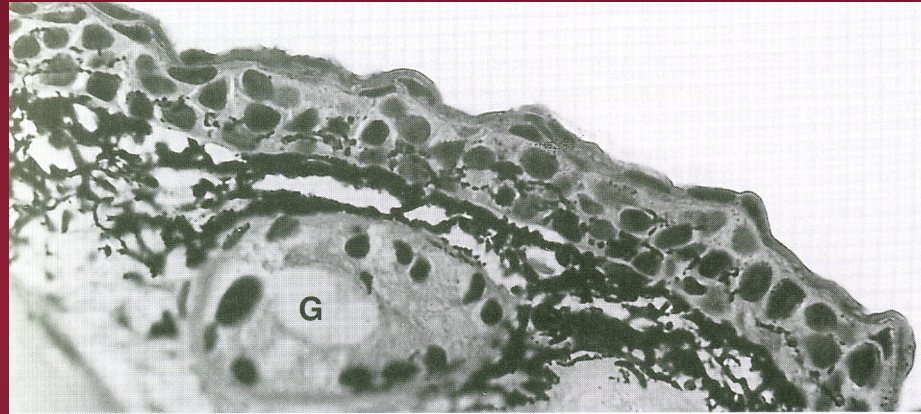


(d)



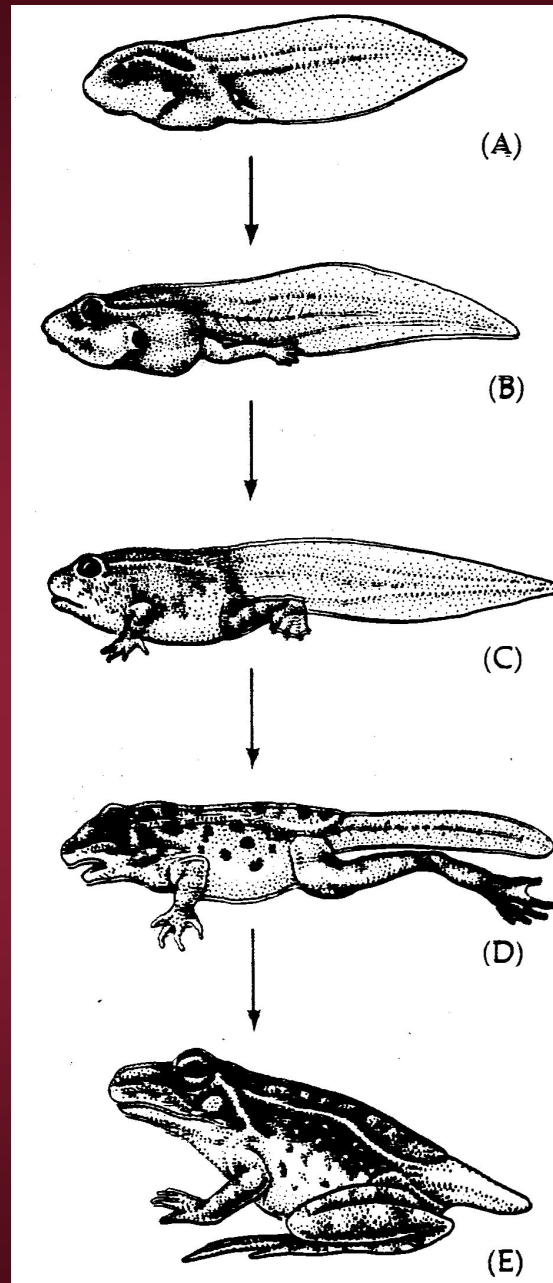


TEGUMENTO ANFIBI



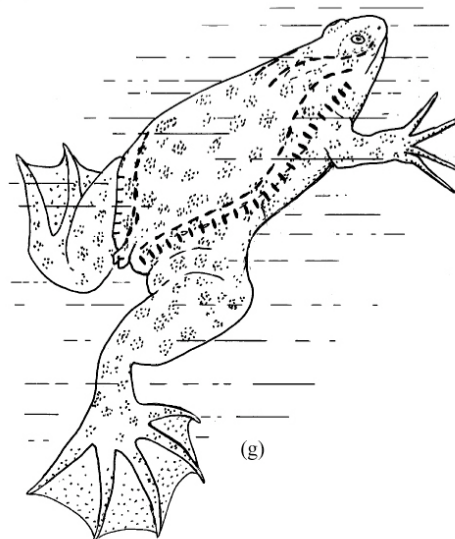
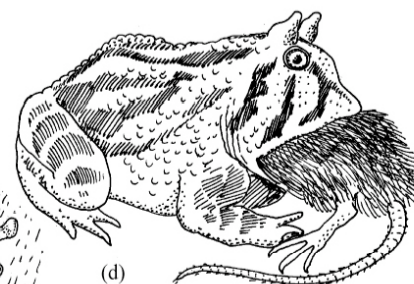
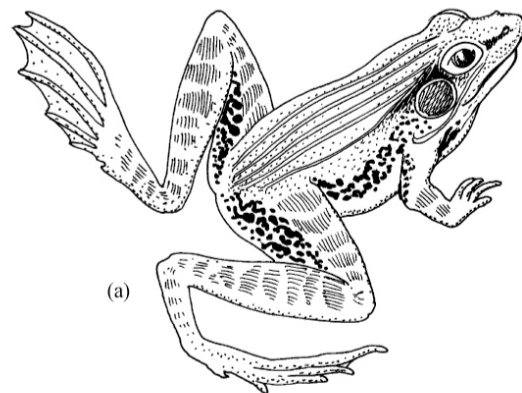
ANURI

- PRIVI DI CODA
- MOVIMENTO A SALTI
- UROSTILO (FUSIONE DELLE VERTEBRE SACRALI)
- FUSIONE DI TIBIA E FIBULA
- RESPIRAZIONE CON MUSCOLATURA BOCCALE
- VOCALIZZAZIONI (ACCOPPIAMENTO-AVVERTIMENTO)

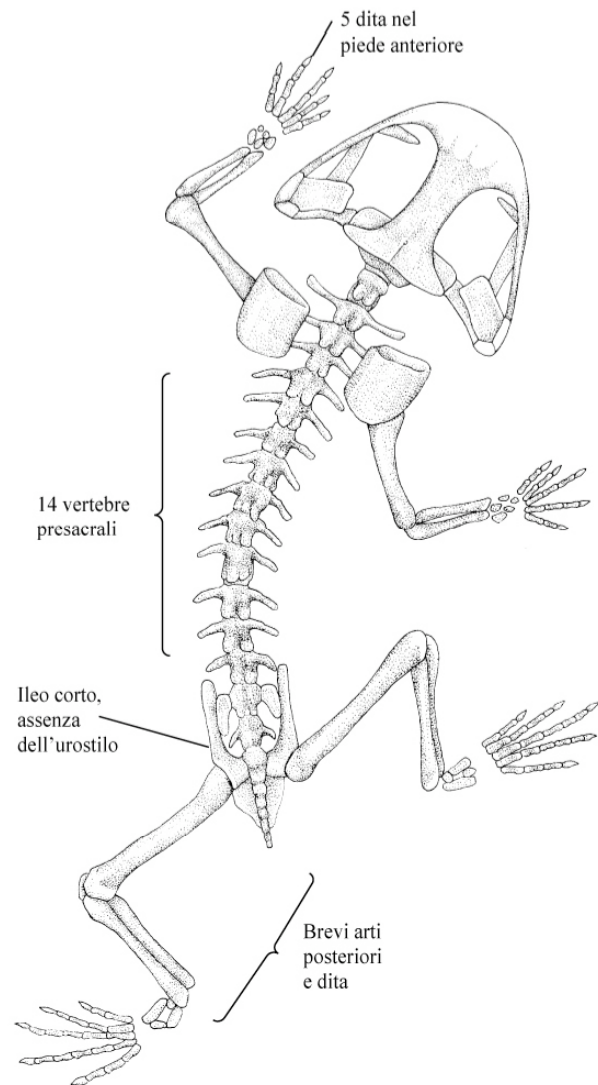


System	Larva	Adult
Locomotory	Aquatic; tail fins	Terrestrial; tailless tetrapod
Respiratory	Gills, skin, lungs; larval hemoglobins	Skin, lungs; adult hemoglobins
Circulatory	Aortic arches; aorta; anterior, posterior, and common cardinal veins	Carotid arch; systemic arch; jugular veins
Nutritional	<i>Herbivorous</i> : Long spiral gut—intestinal symbionts; small mouth—horny jaws, labial teeth	<i>Carnivorous</i> : Short gut—proteases; large mouth—long tongue
Nervous	Lack of nictitating membrane, porphyropsin, lateral line system—Mauthner's neurons	Development of ocular muscles, nictitating membrane, rhodopsin, loss of lateral line system—degeneration of Mauthner's neurons; tympanic membrane
Excretory	Largely ammonia, some urea (ammonotelic)	Largely urea, high activity of enzymes of ornithine-urea cycle (ureotelic)
Integumental	Thin, bilayered epidermis with thin dermis; no mucus glands or granular glands	Stratified squamous epidermis with adult keratins; well-developed dermis contains mucus glands and granular glands secreting antimicrobial peptides

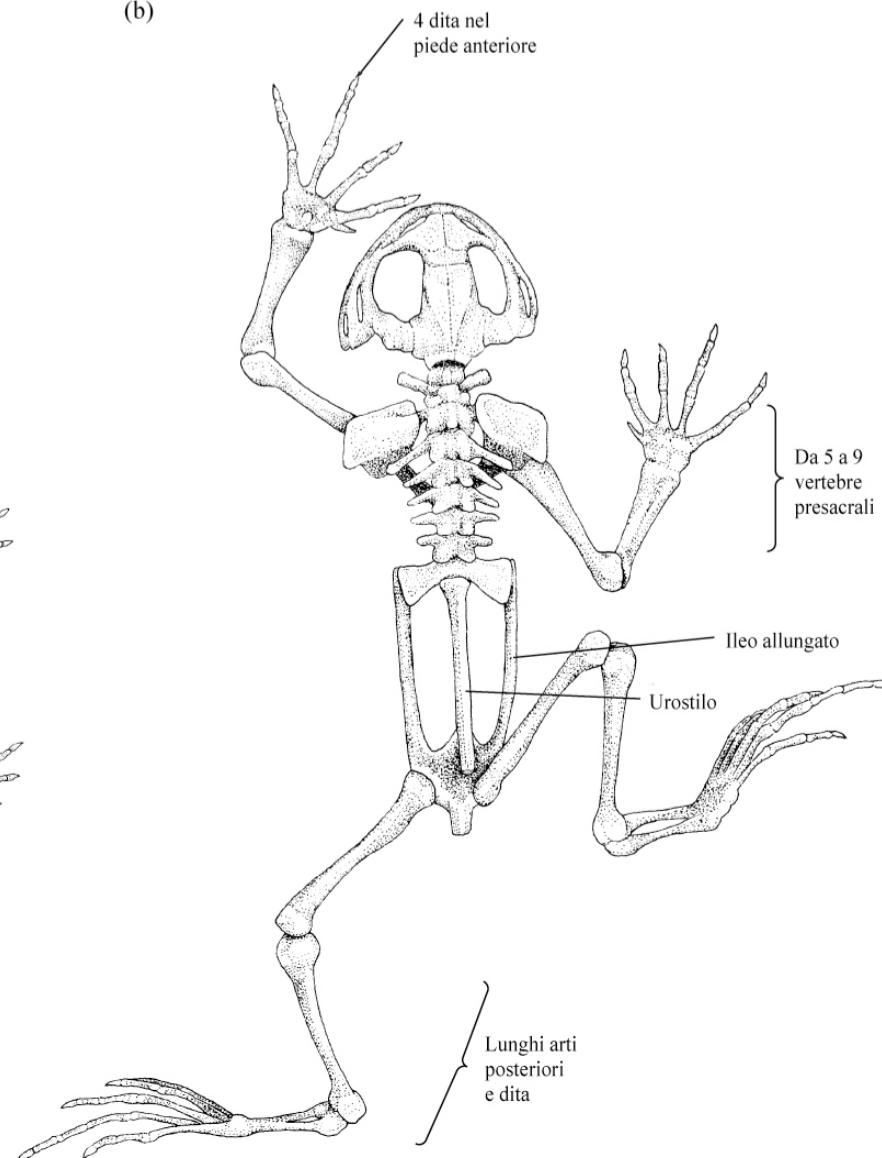
Source: Data from Turner and Bagnara, 1976; Silver et al., personal communication.



(a)

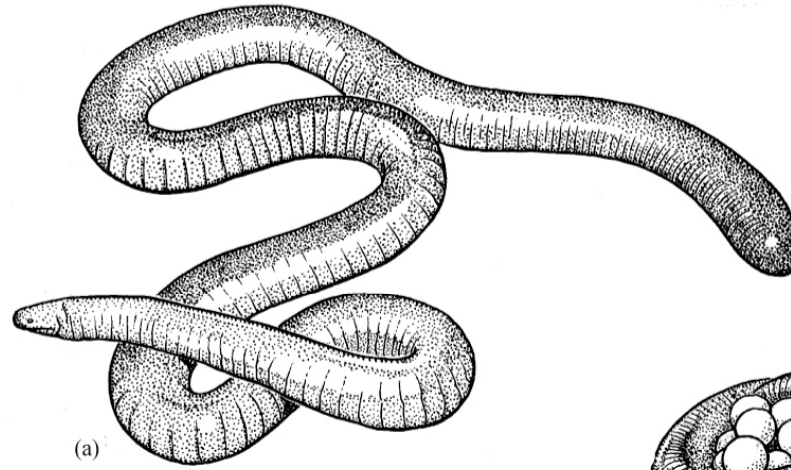


(b)

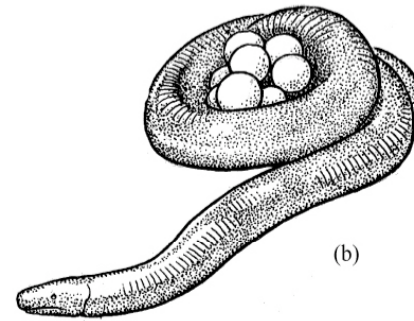


APODI (GIMNOFIONI)

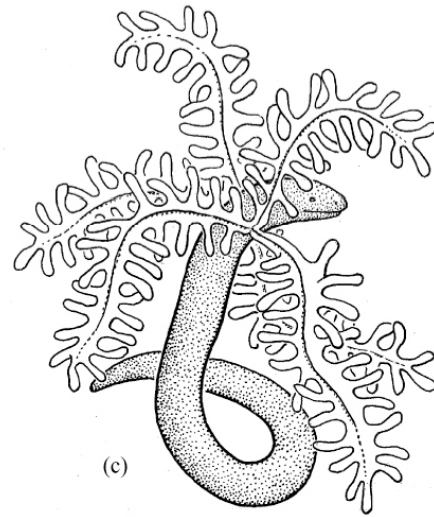
- PRIVI DI ARTI
- IPOGEI
- OCCHI DEGENERATI
- SCAGLIE DERMICHE



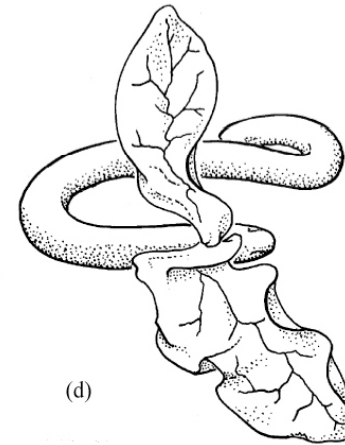
(a)



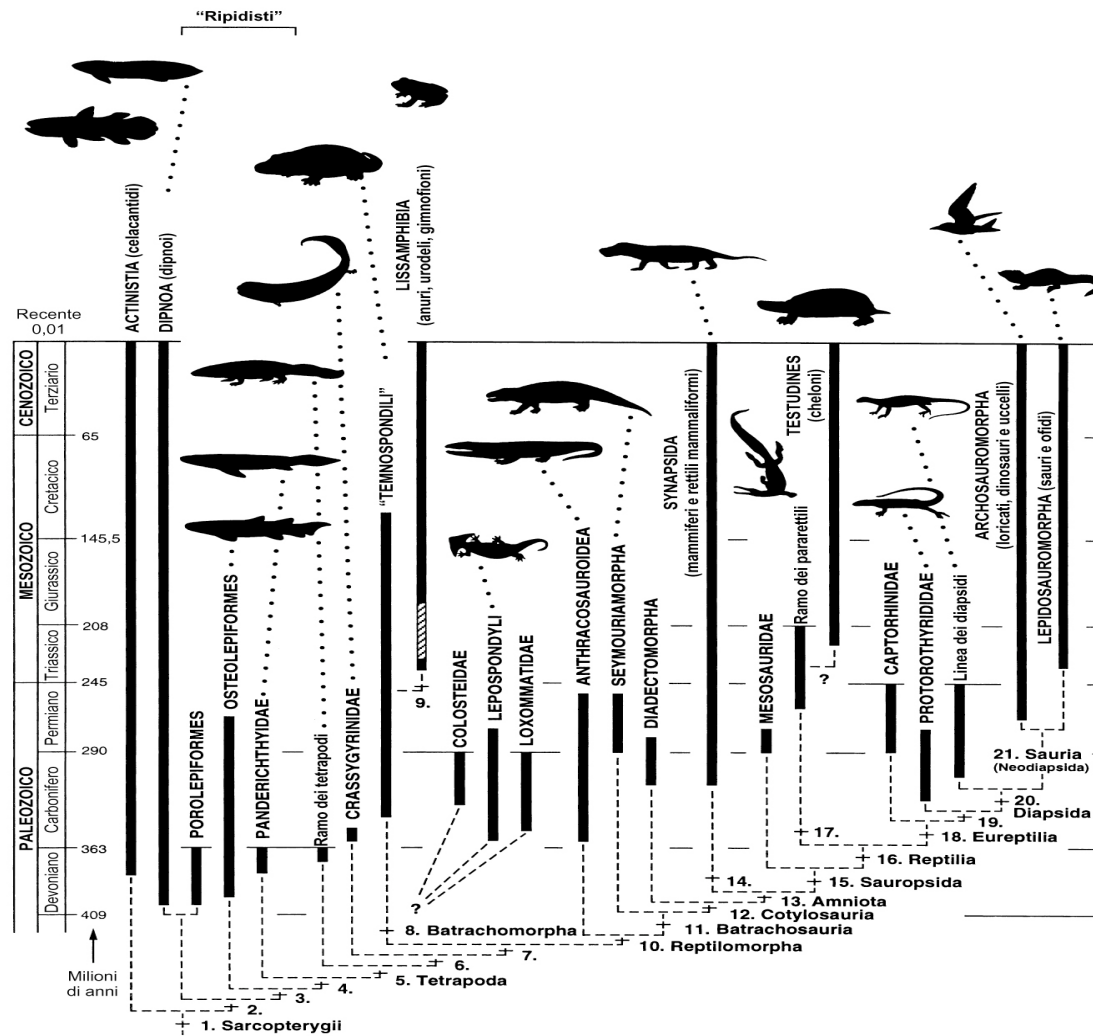
(b)

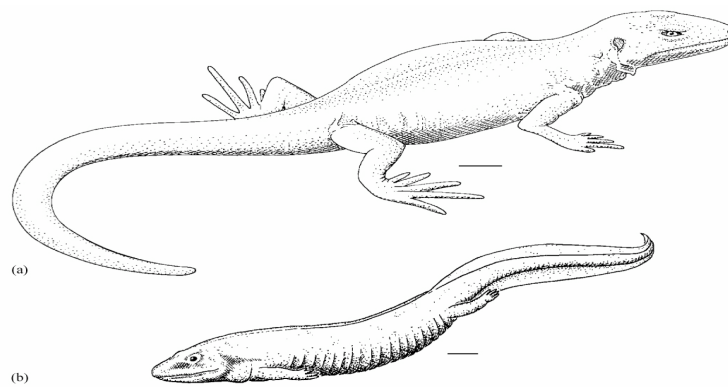


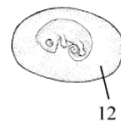
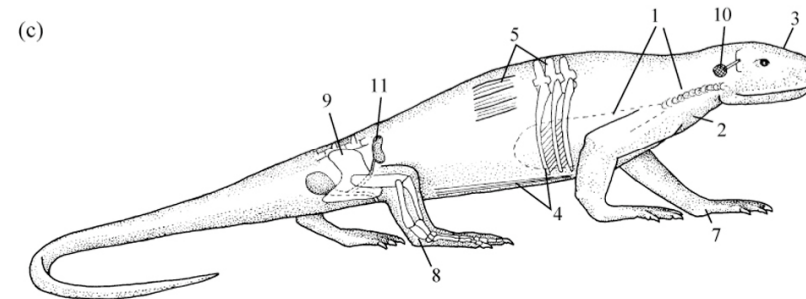
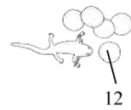
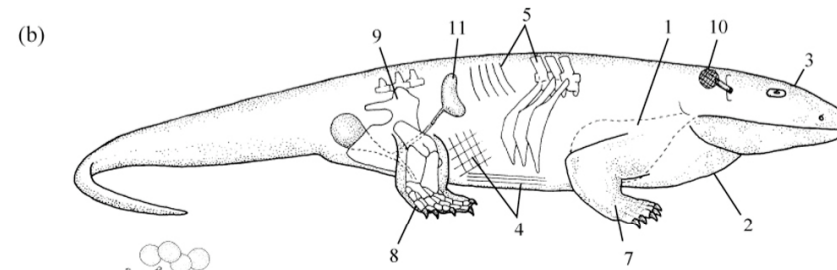
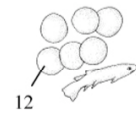
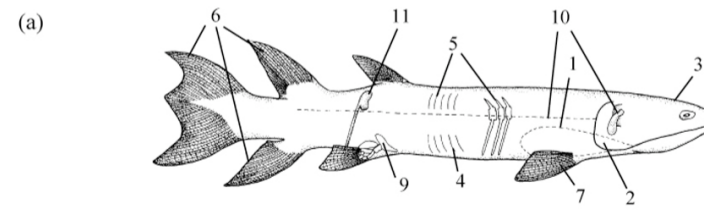
(c)



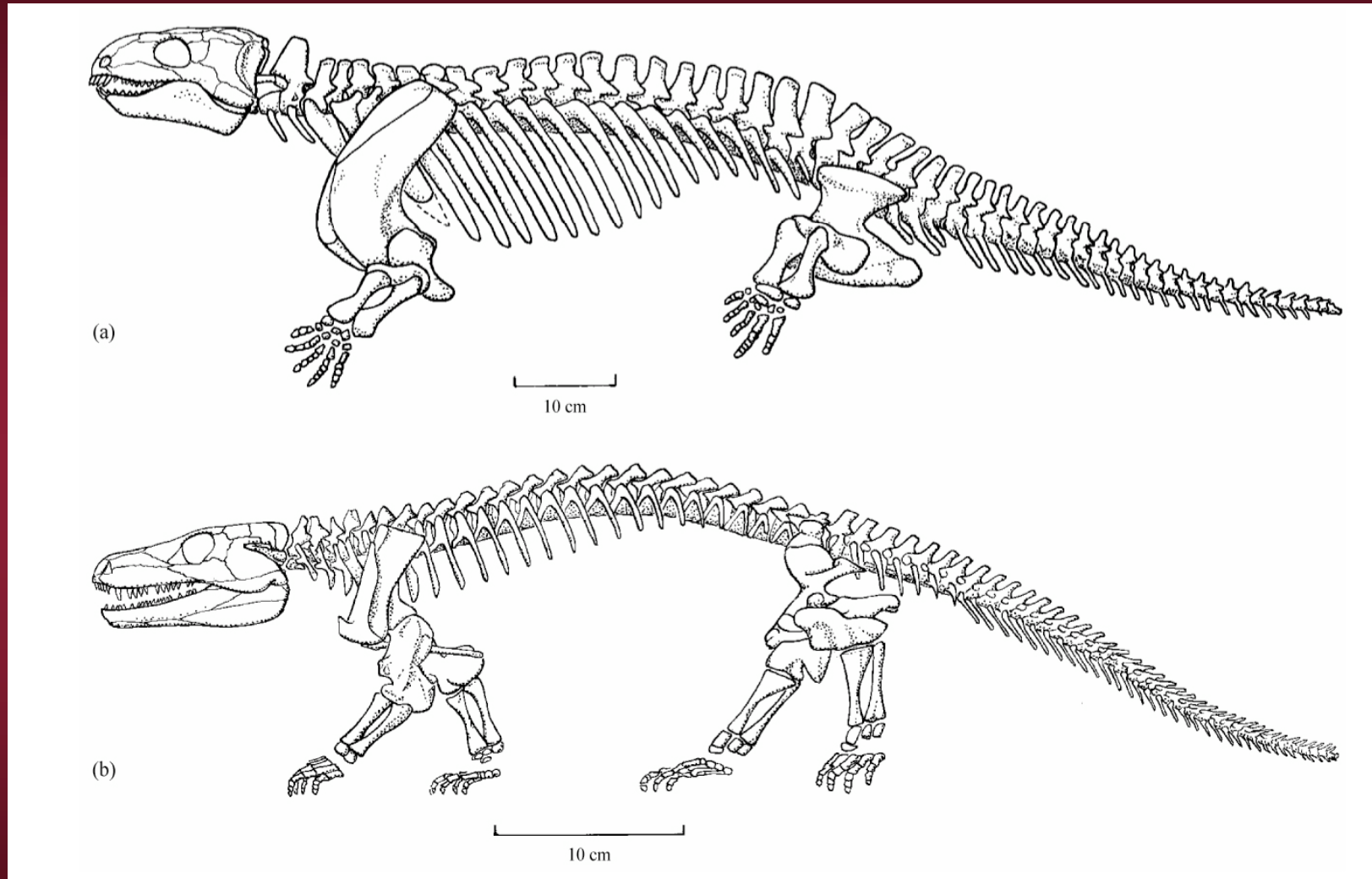
(d)







DIADECTES



SEYMOURIA

WESTLOTHLIANA

