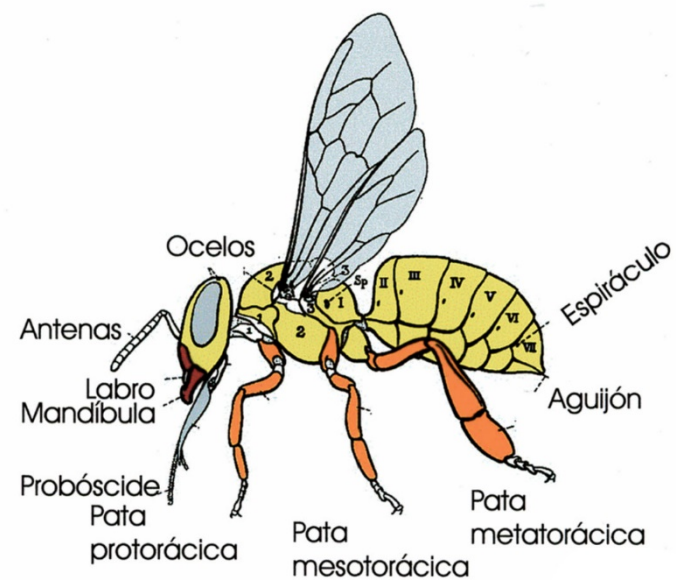
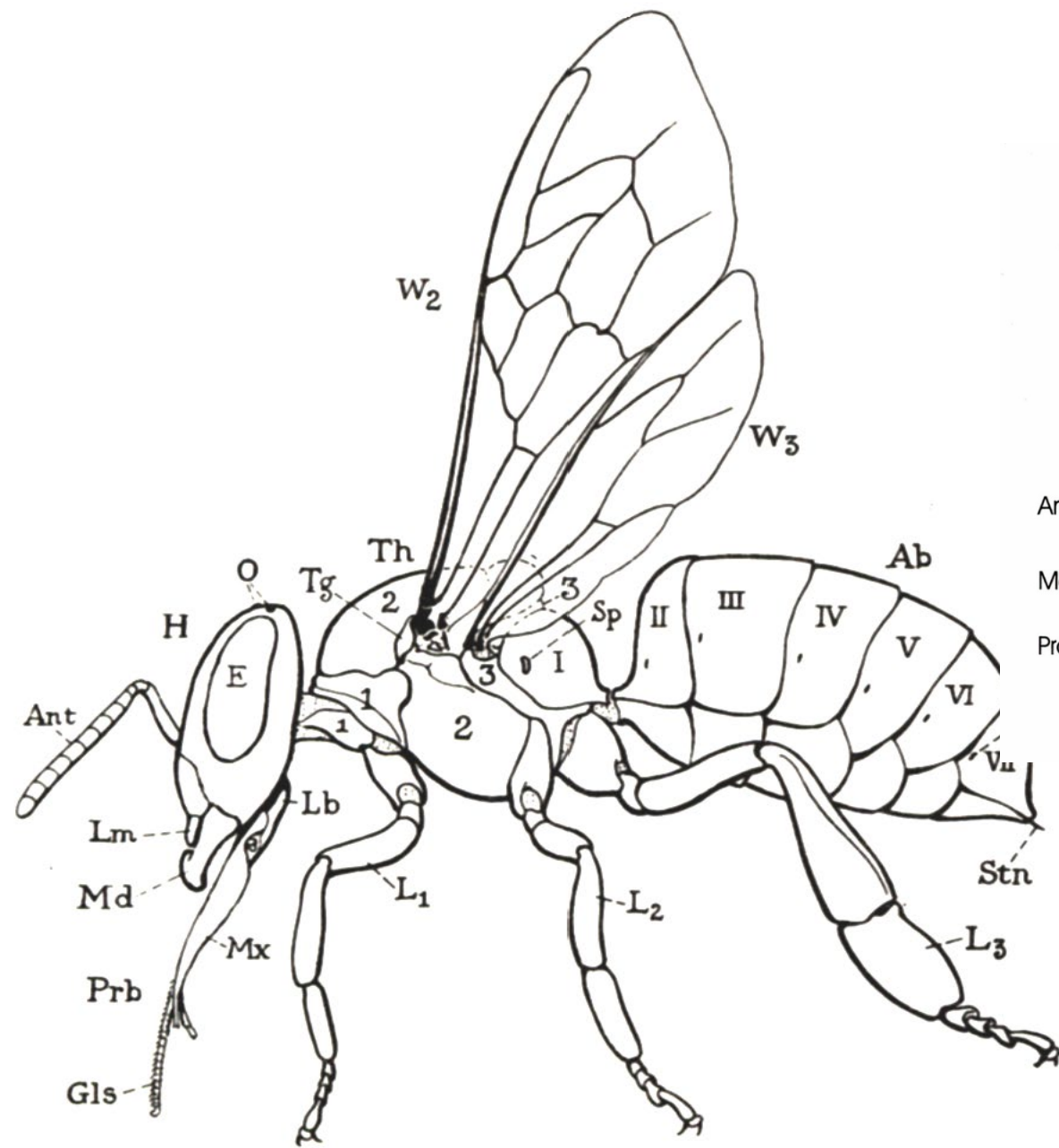
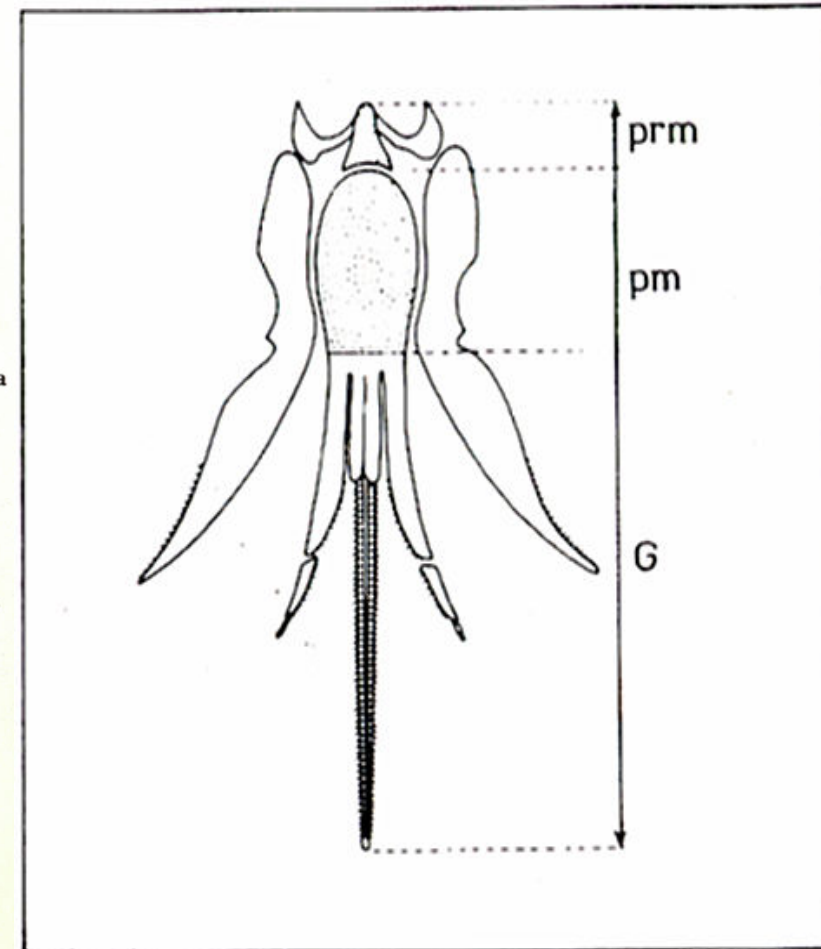
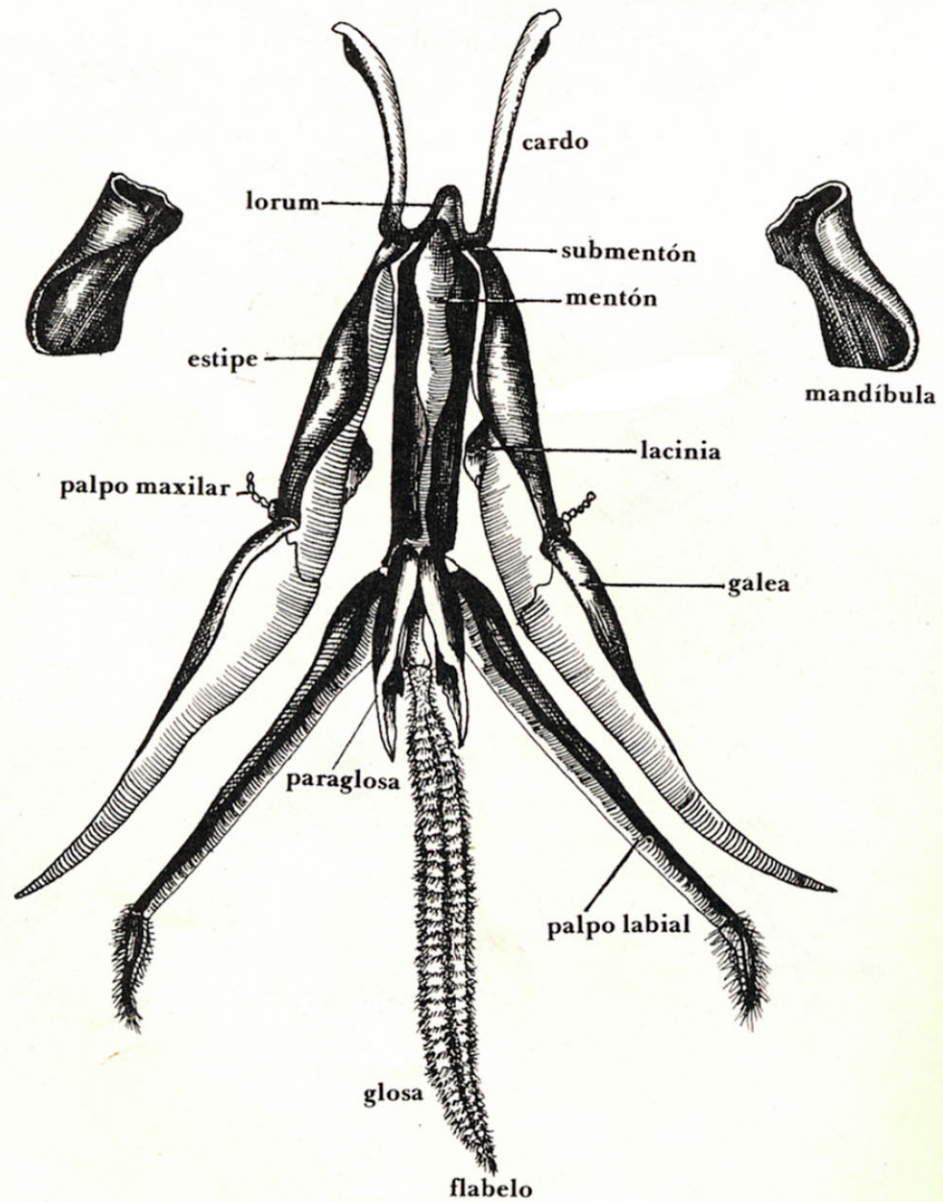
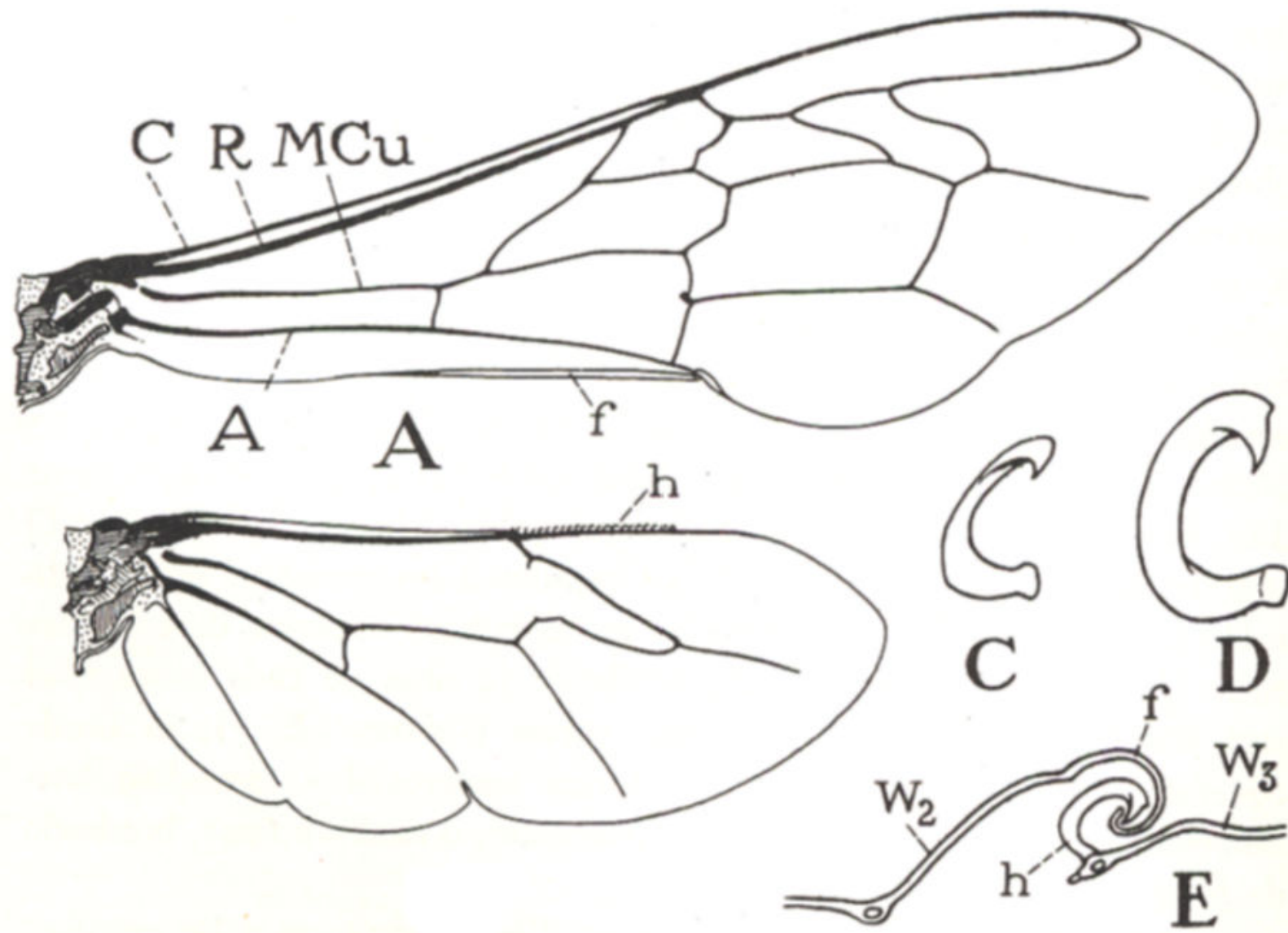


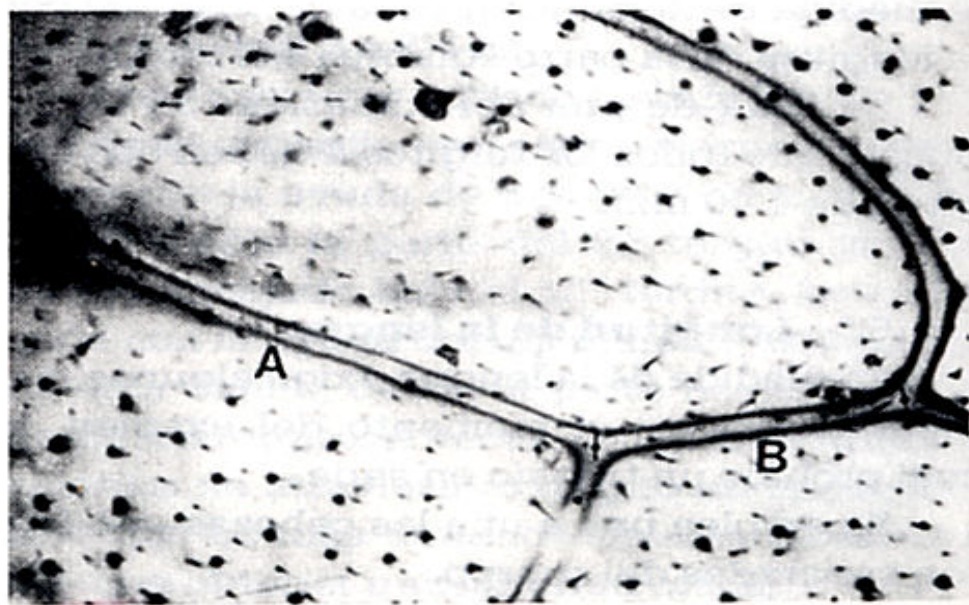
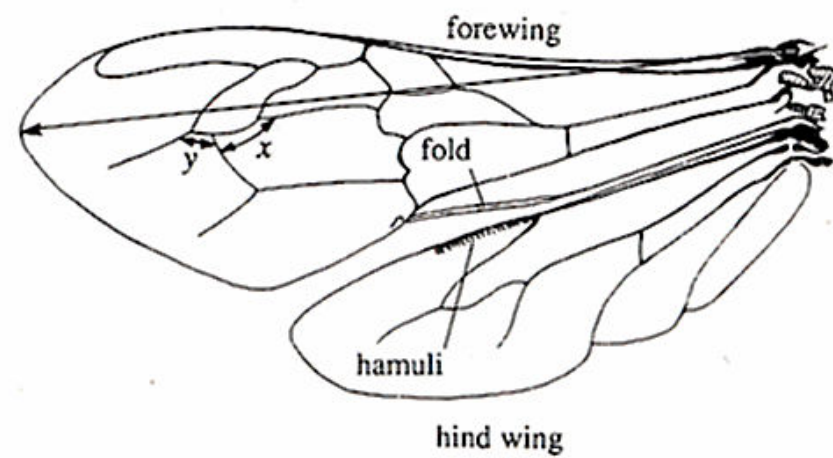
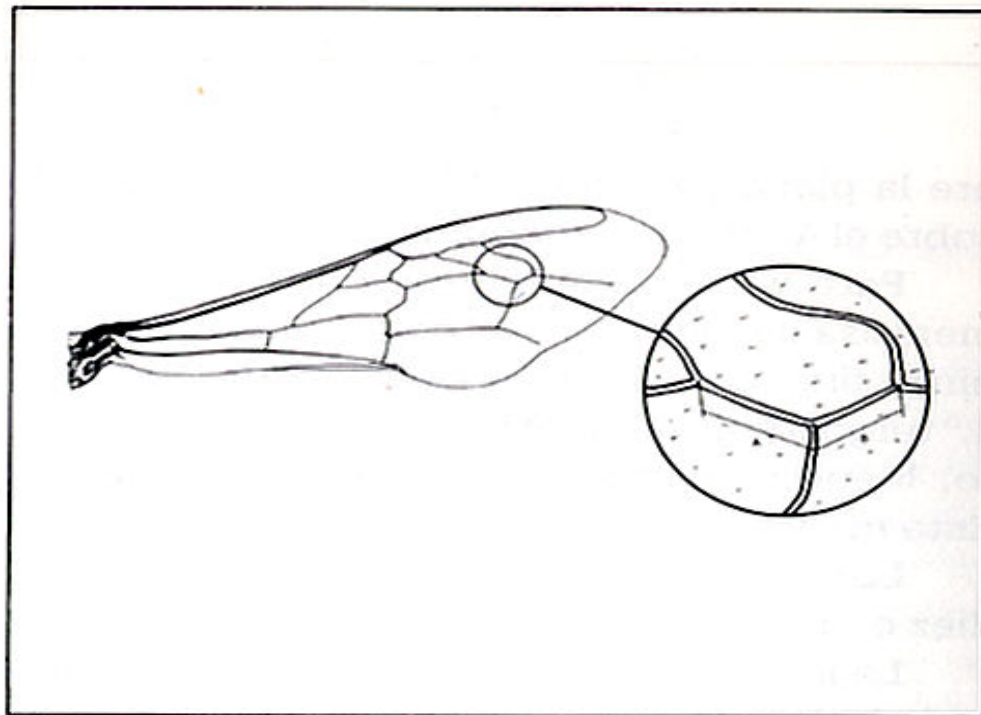
Anatomía Externa

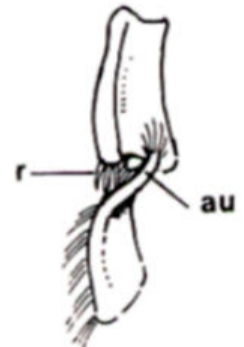
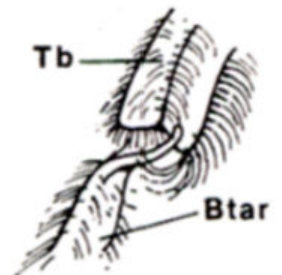
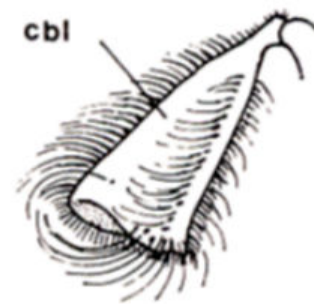
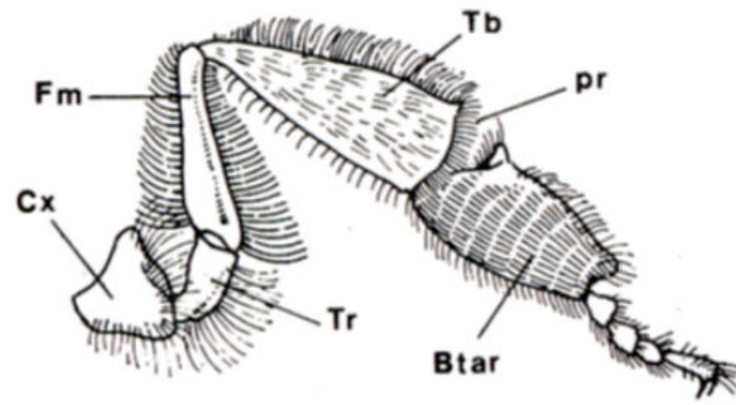
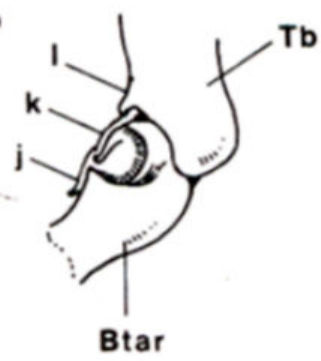
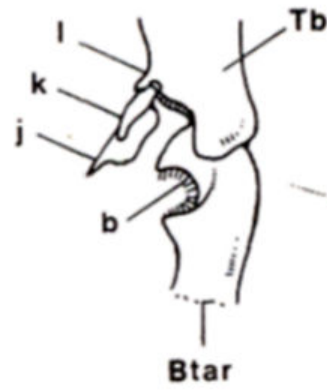
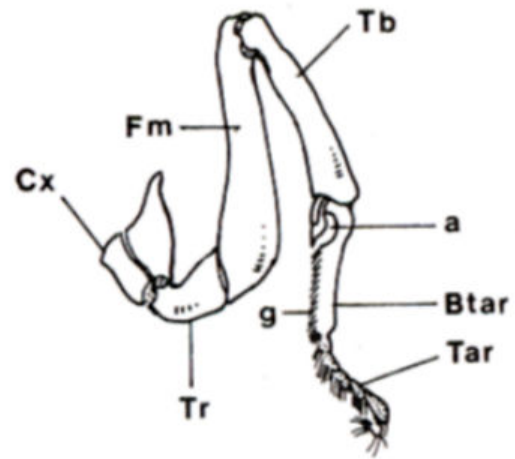


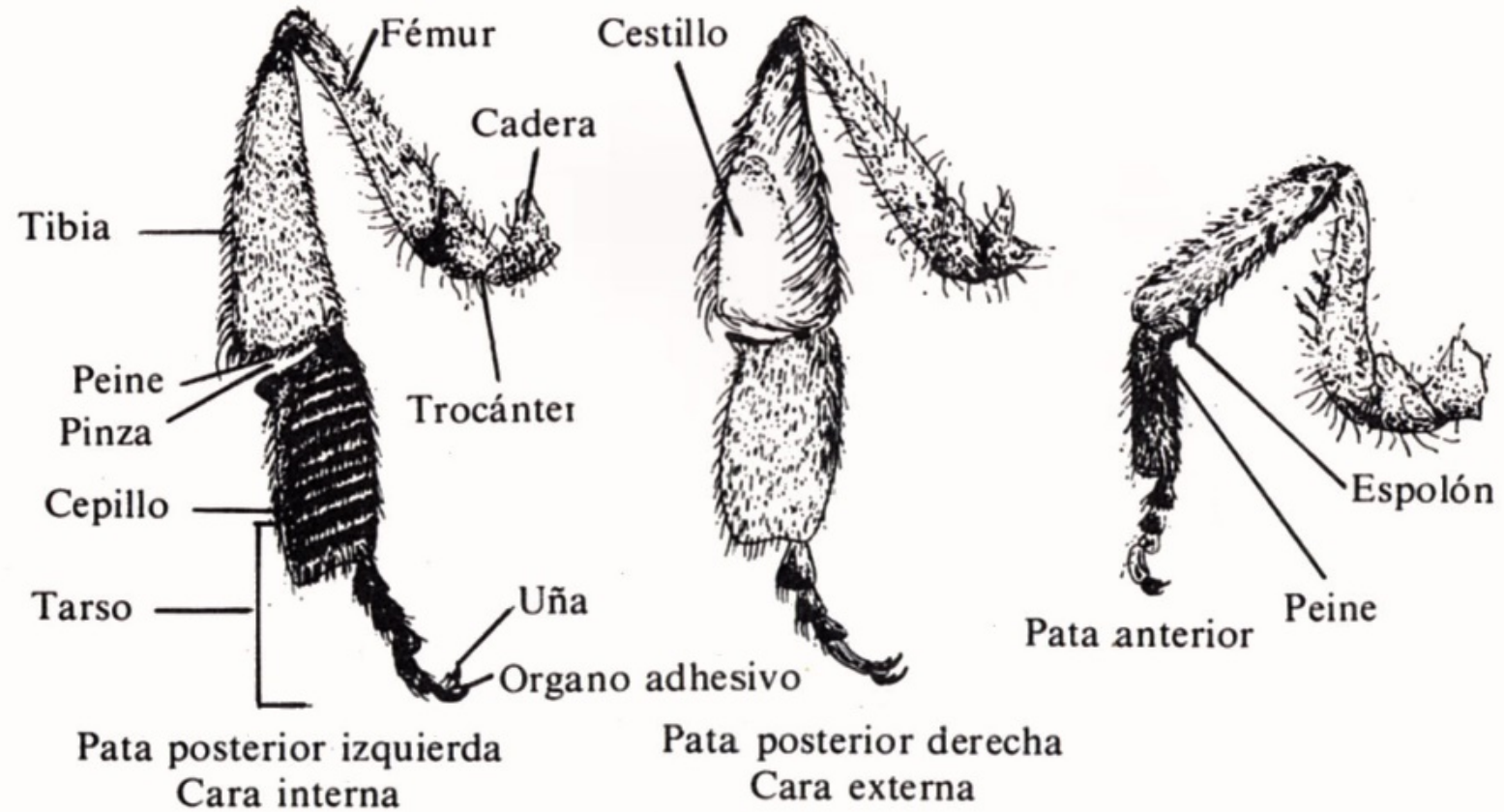


Lengua de la obrera:
G, glossa; pm, postmentum; prm, praementum.





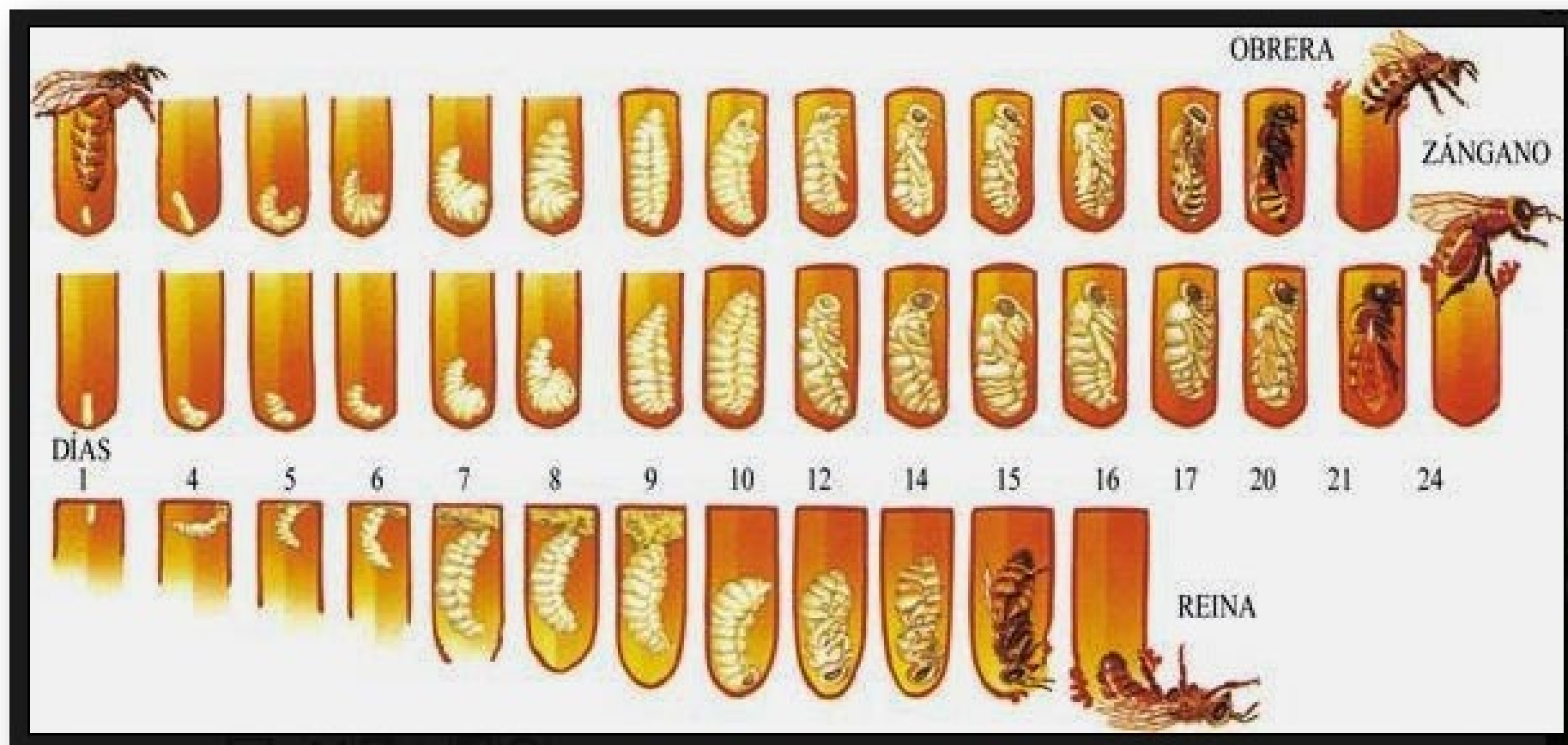




Anatomía Interna y metamorfosis

	REINA	OBRERA	ZÁNGANO
Sexo	Hembra fértil	Hembra estéril	Macho fértil
Función	Oviposición	Labores diversas	Fecundación
Periodo productivo	2 años	1 – 6 meses	8 meses máximo
Dirección del desarrollo	16 días	21 días	24 días
Alimentación durante el desarrollo	Jalea real	Jalea real y Pan de abejas	Jalea real y pan de abejas
Tipo de huevos	Fecundados	Fecundados	No fecundados

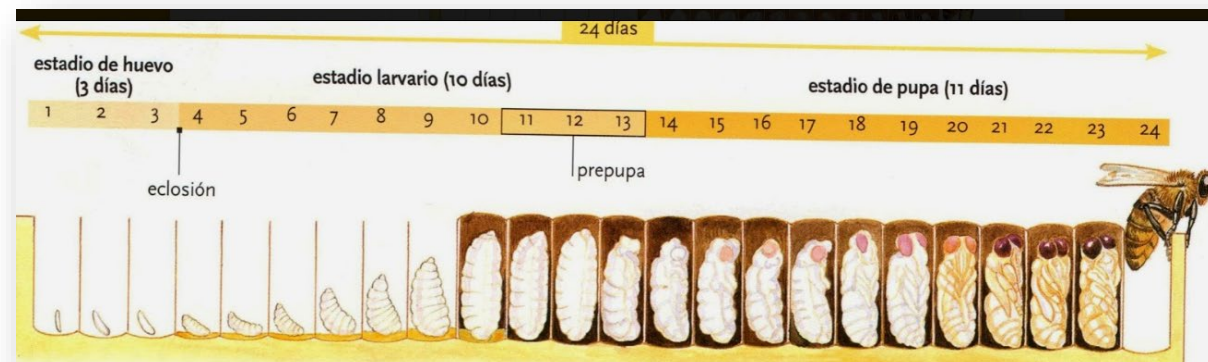
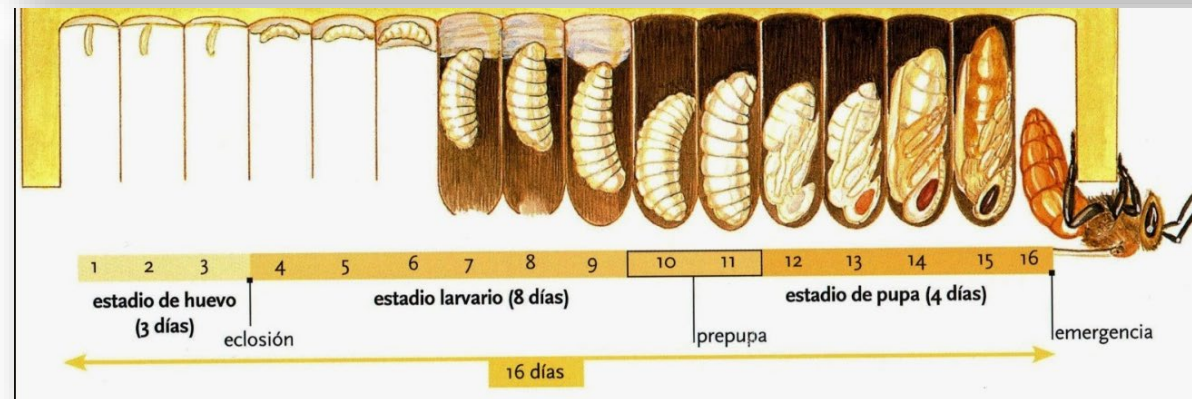
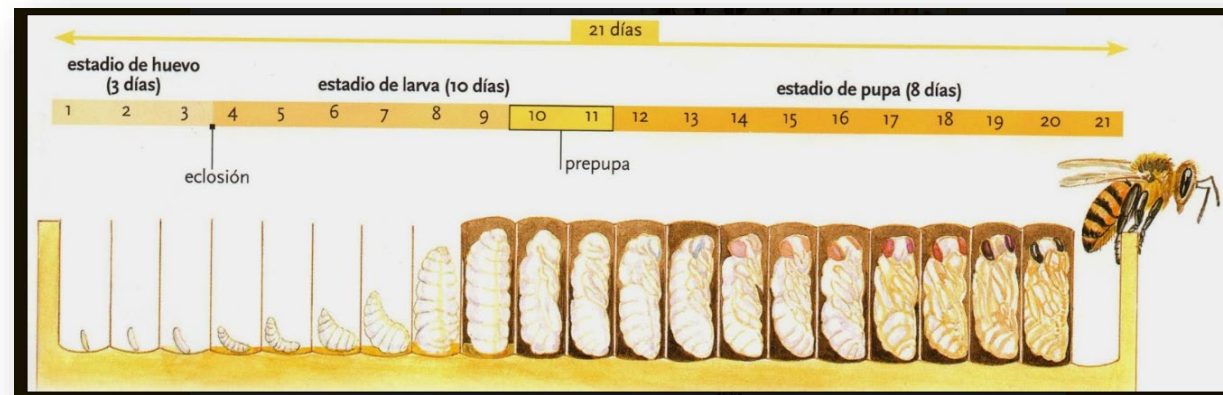
	REINA	OBRERA	ZÁNGANO
Desarrollo embrionario (huevo, días)	3	3	3
Desarrollo larvario (Días)	5	5,5 – 6	7
Hilado del capullo y operculación (Días)	2	2,5	4
Ninfosis	6	10	10
Total en condiciones favorables (Días)	16	21	24
Total en condiciones desfavorables	22	24	28

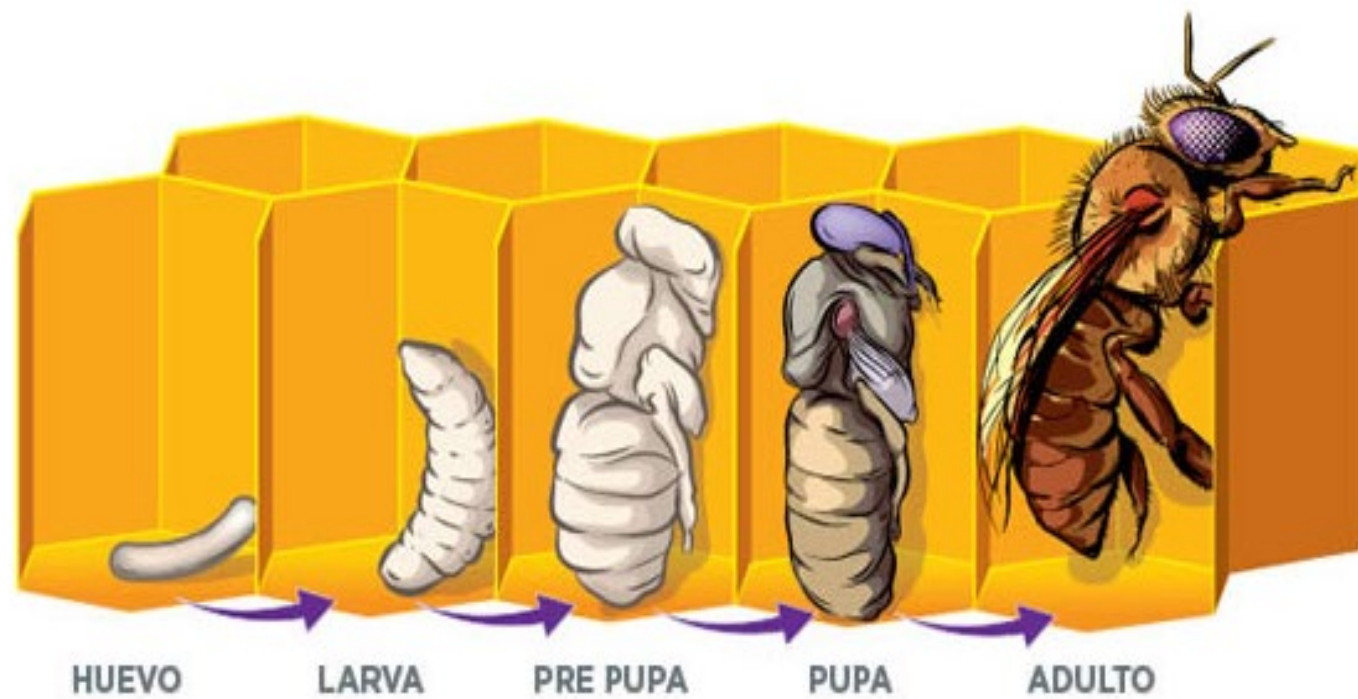








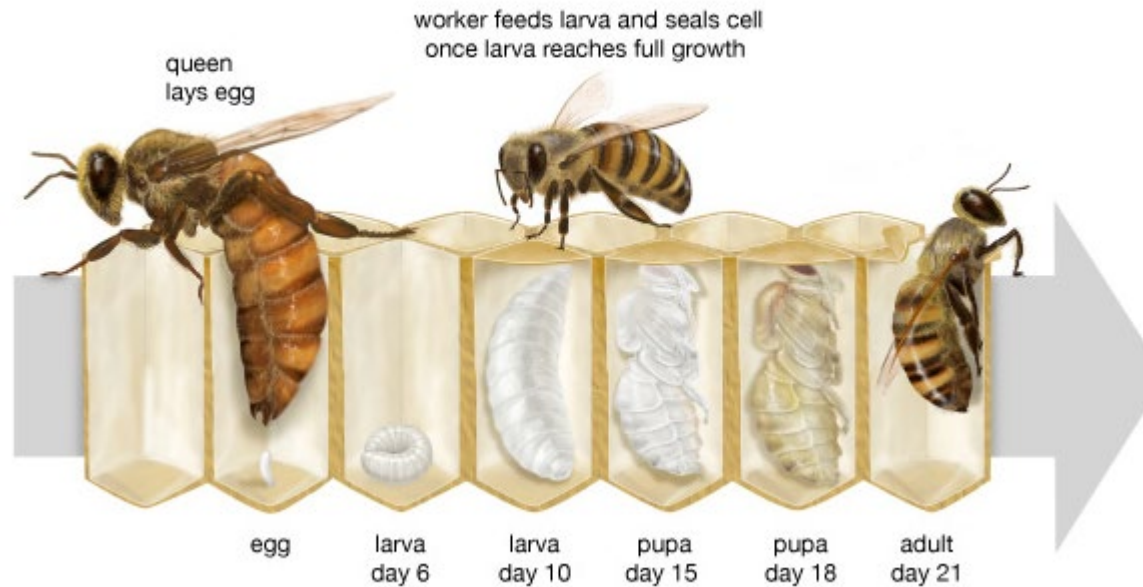




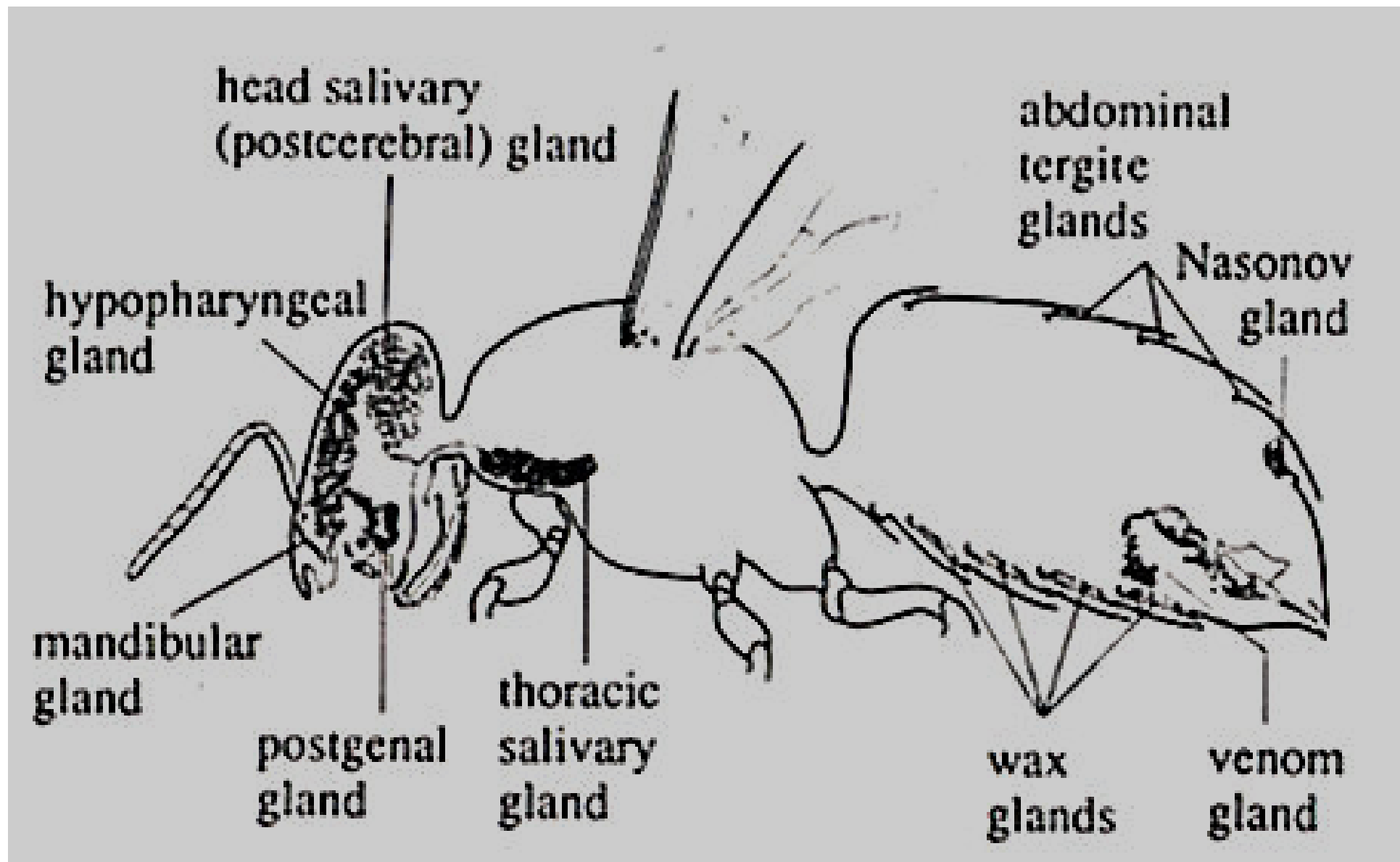
Ciclo de vida de las abejas

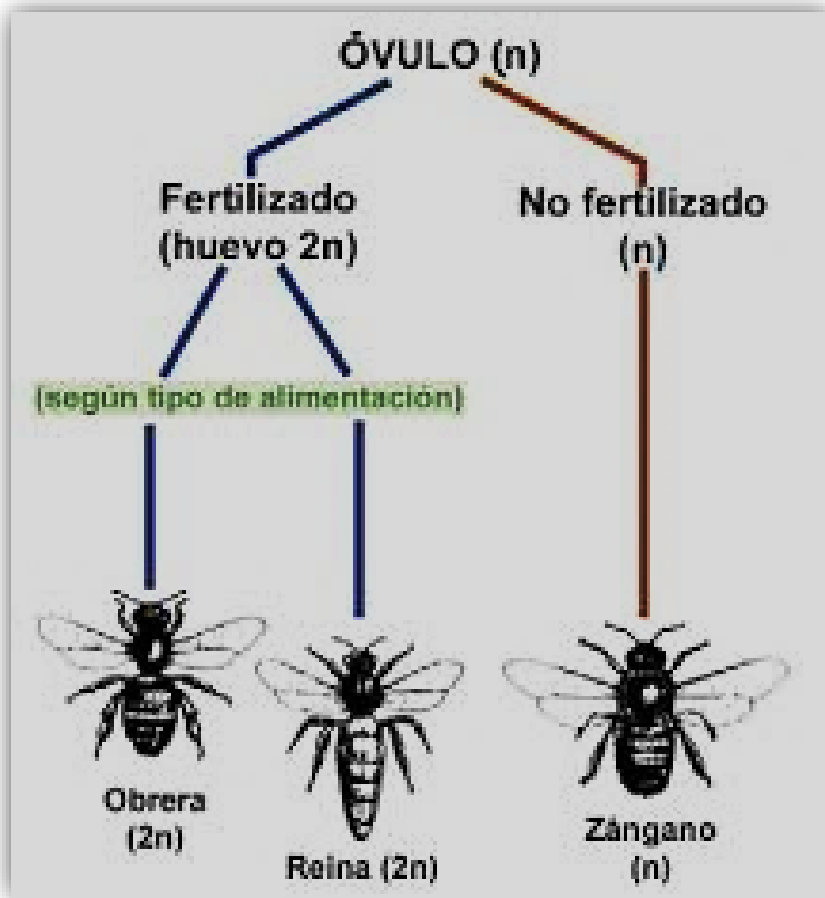


Life cycle of honeybees



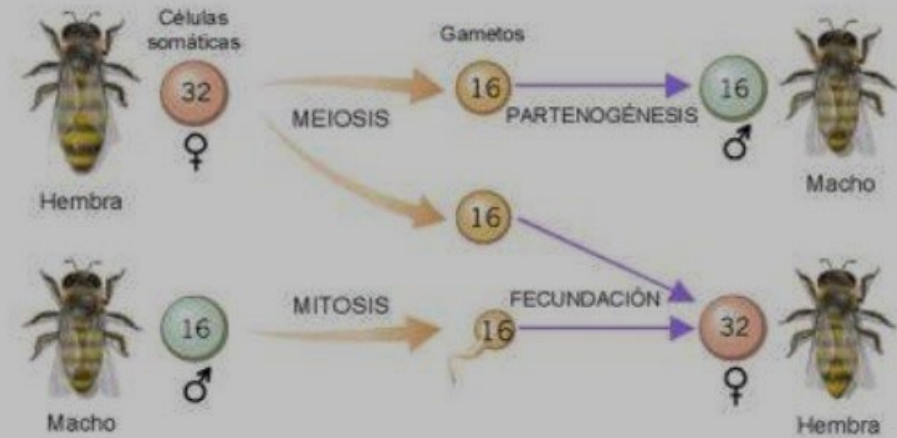




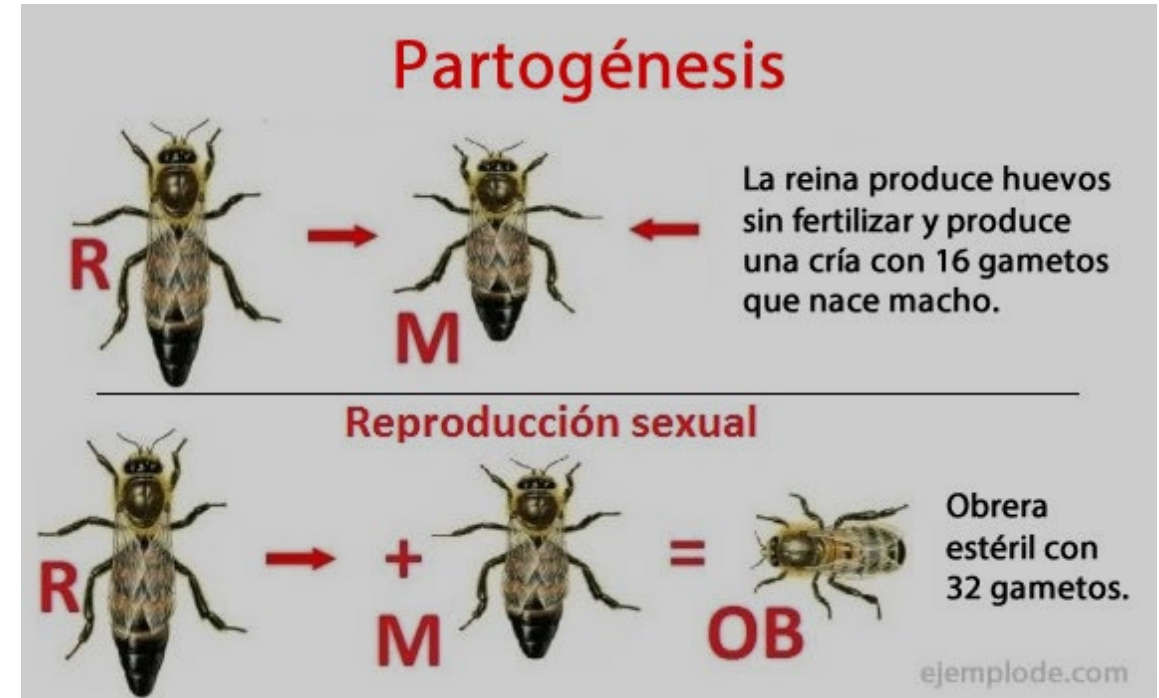
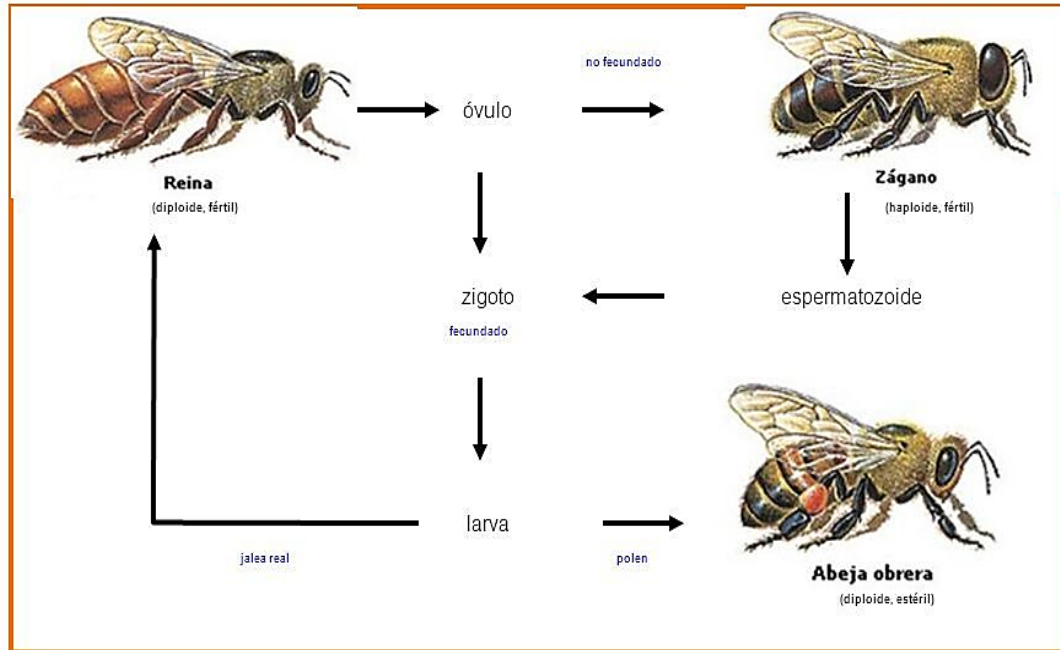


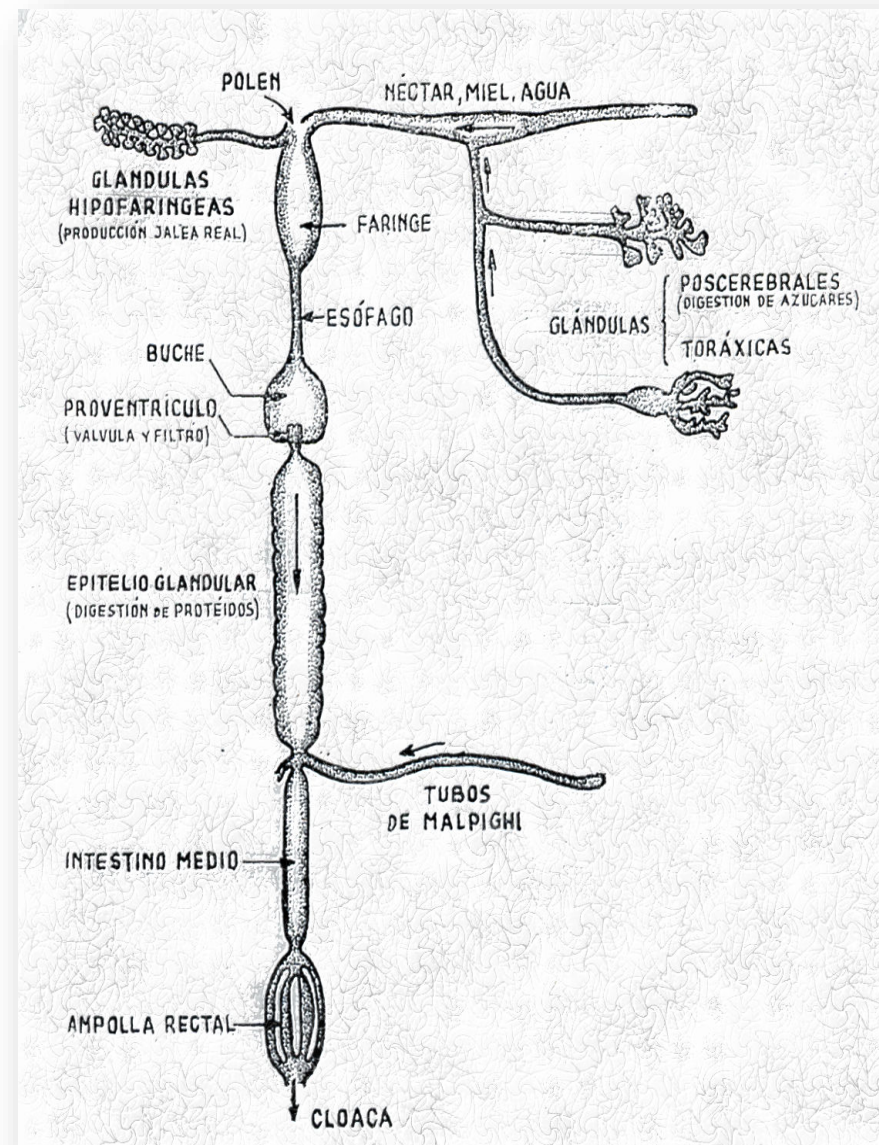
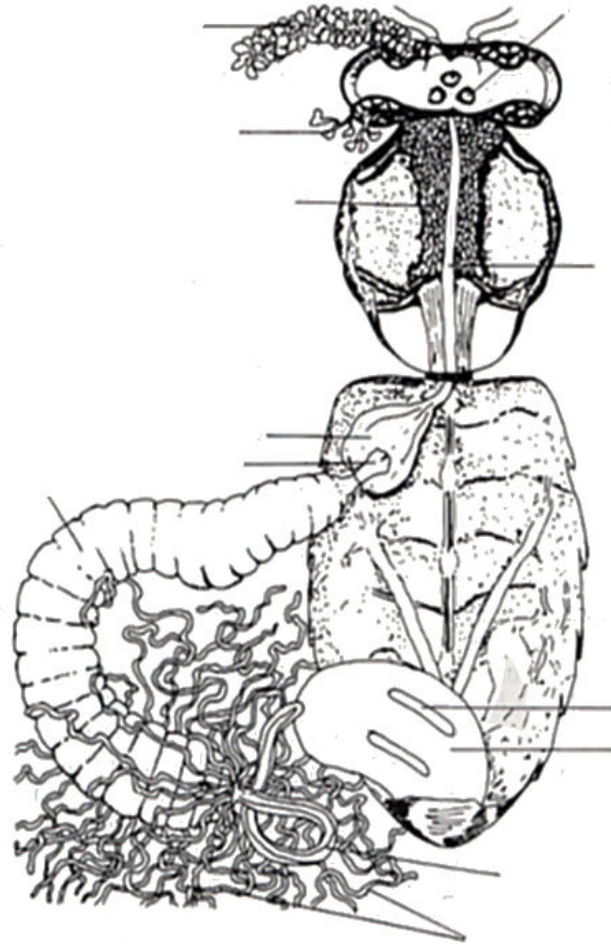
LA PARTENOGENÉISIS

Se origina un organismo haploide (n) a partir de un ovulo no fecundado. Común en abejas y hormigas.



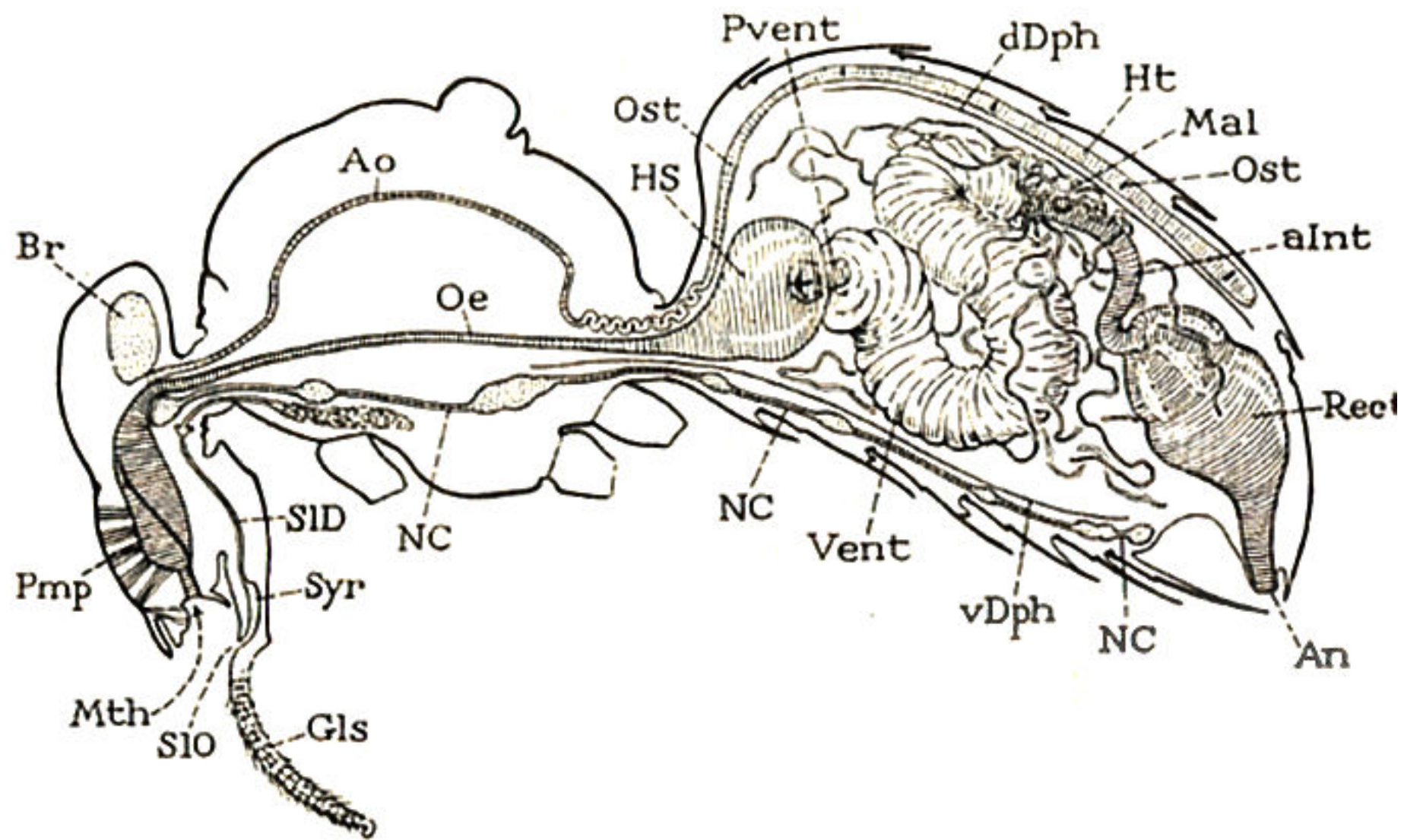
2. Reproducción sexual sin fecundación: Partenogénesis en abejas

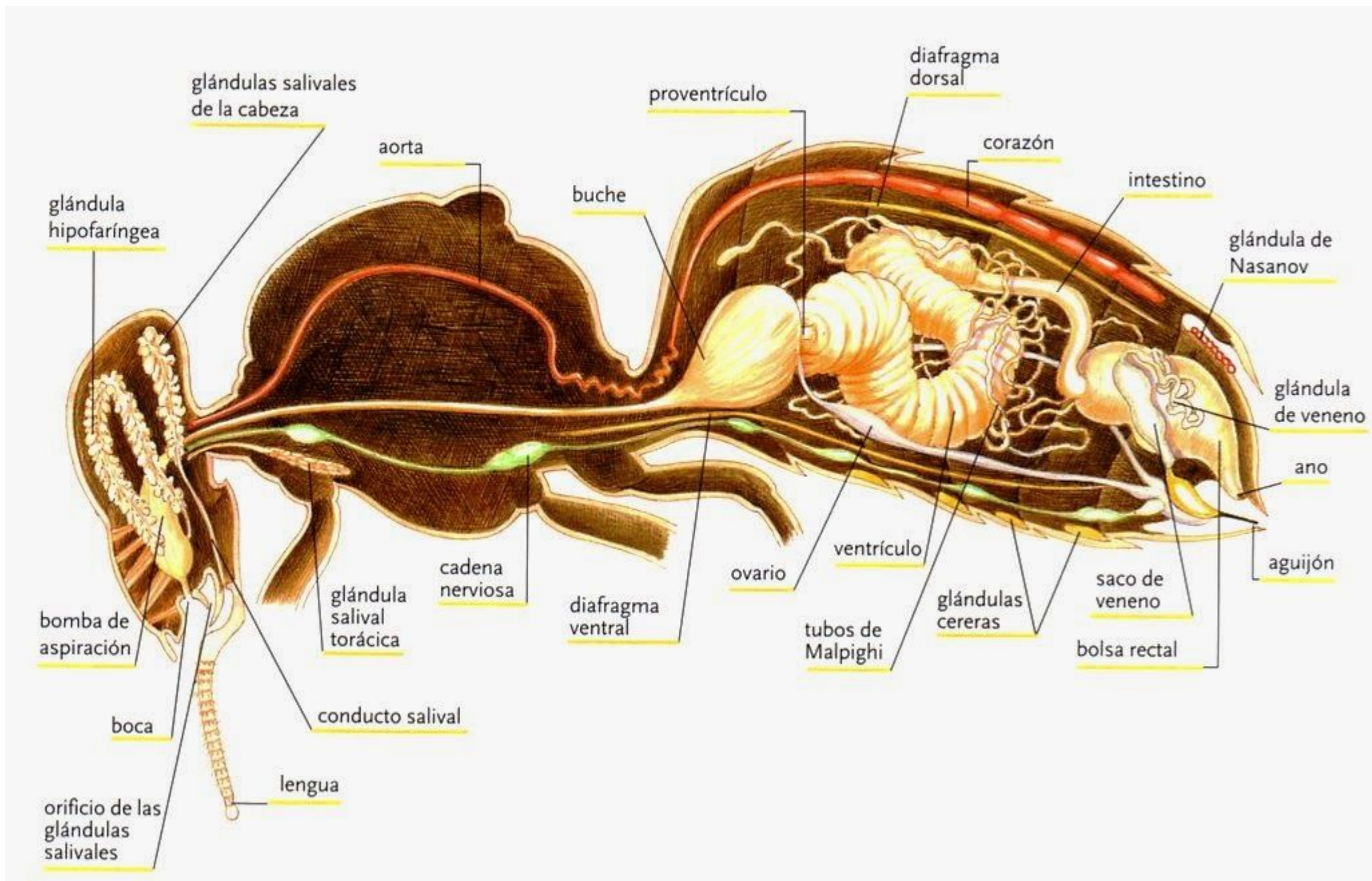


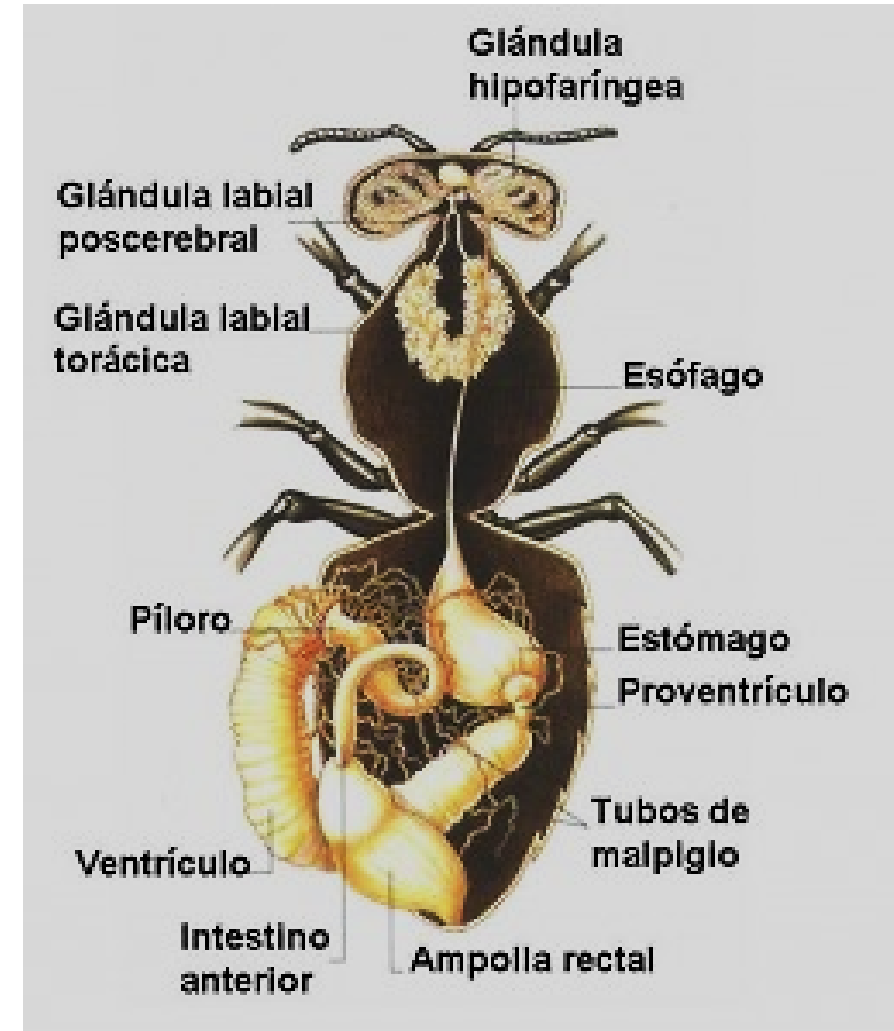
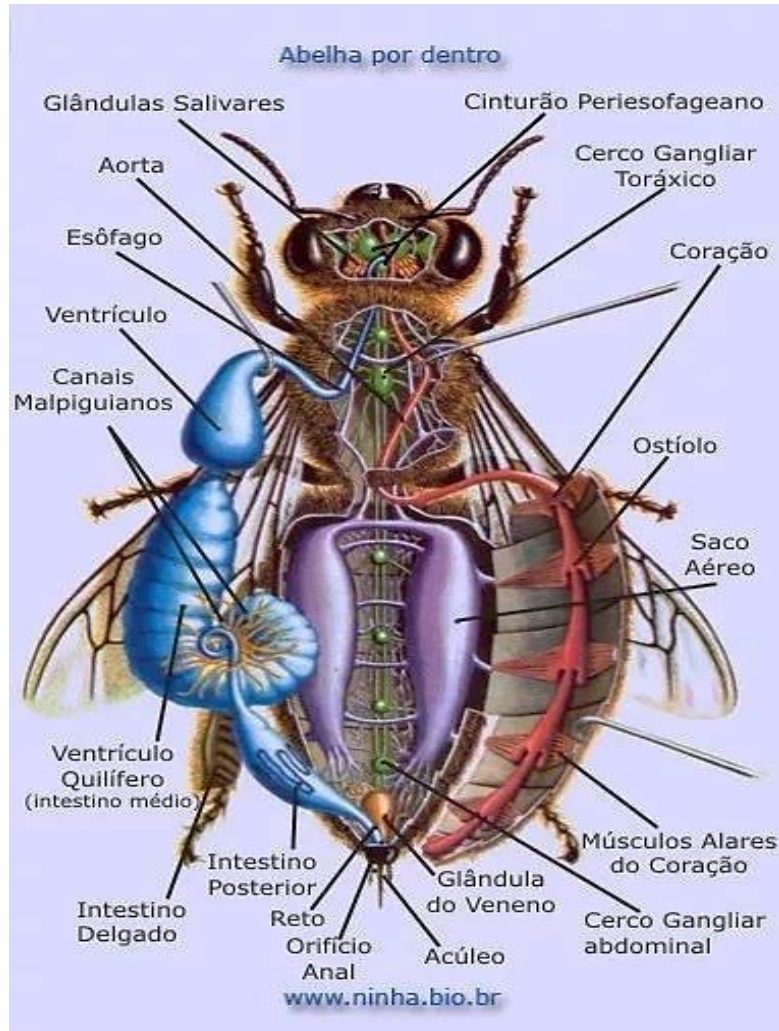


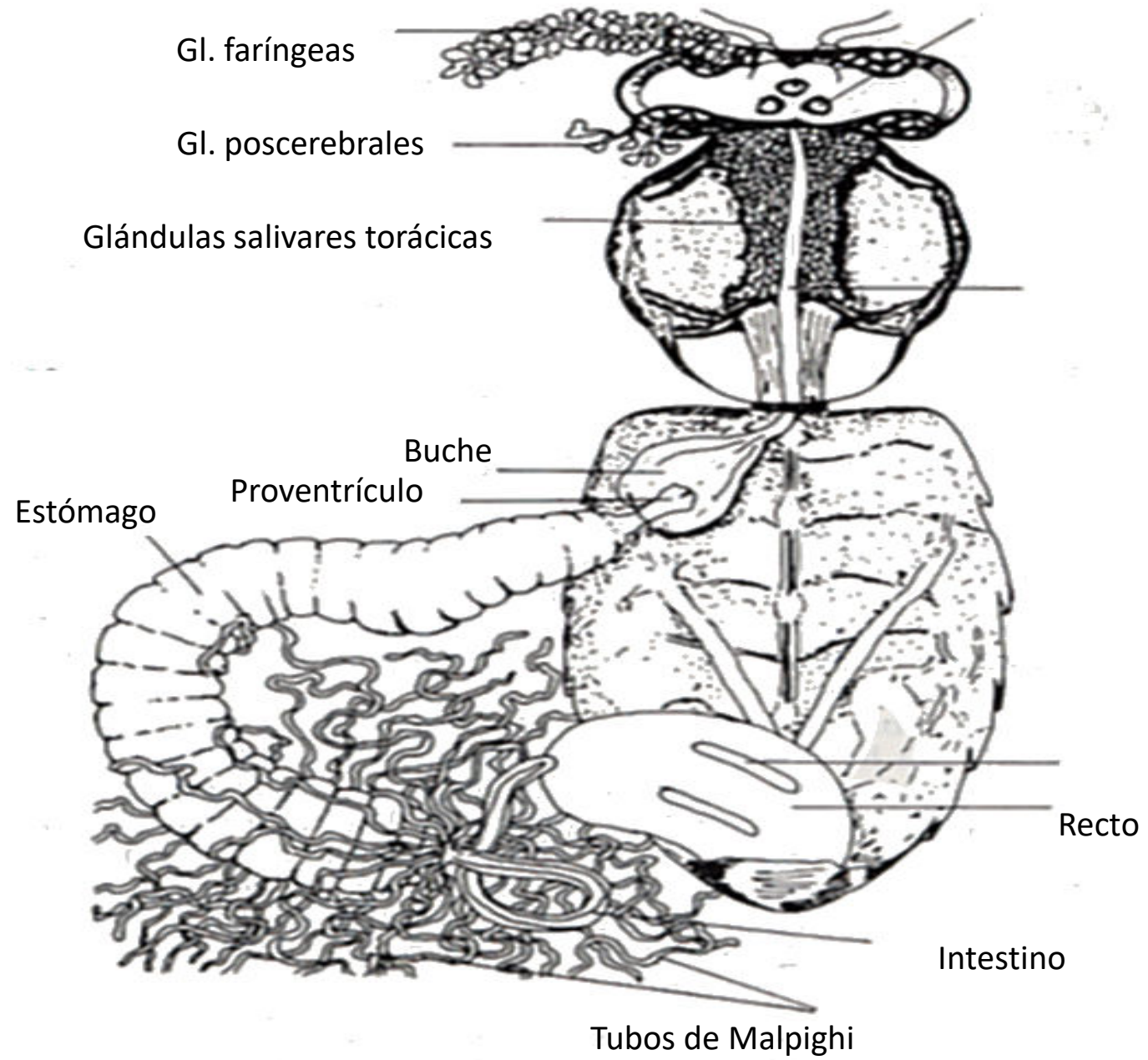
El aparato digestivo empieza en la boca y termina en el ano.

En la boca desembocan tres glándulas: Las lactíferas, las de mandíbula superior y las salivales. Las lactíferas son las de mayor tamaño y secretan la jalea real.

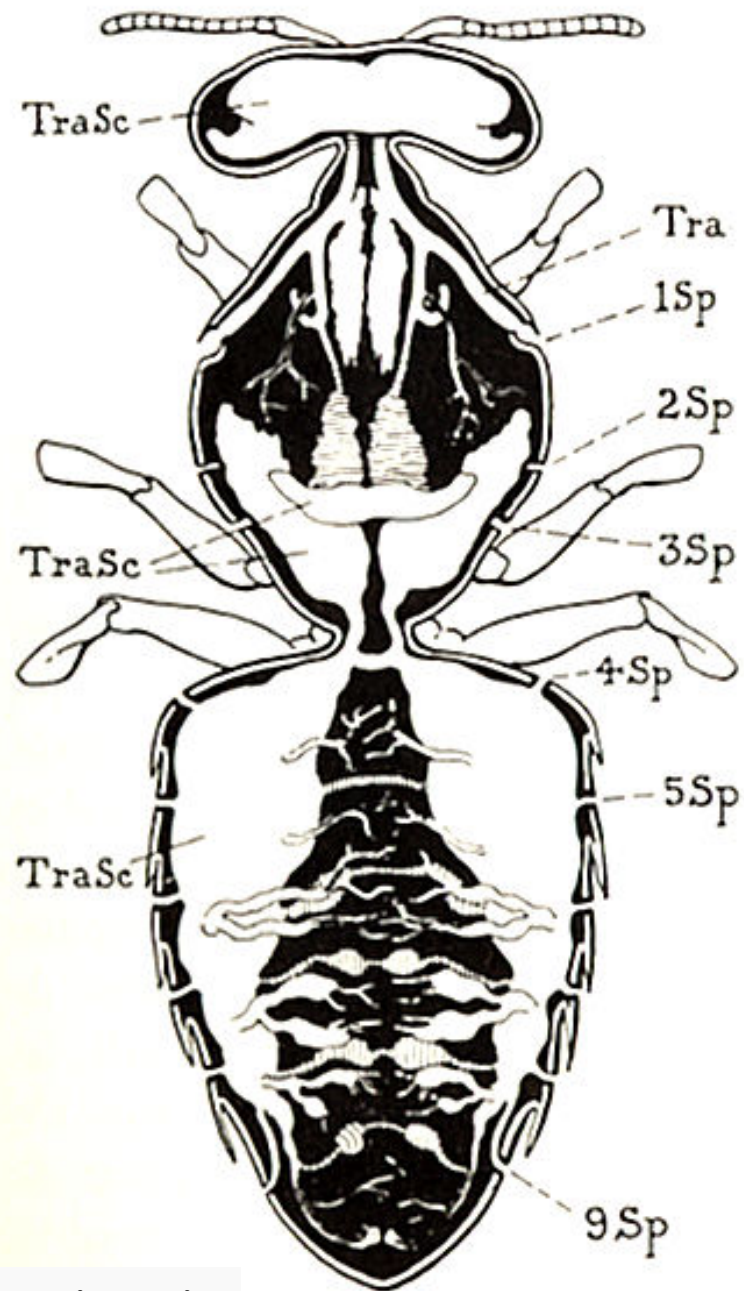




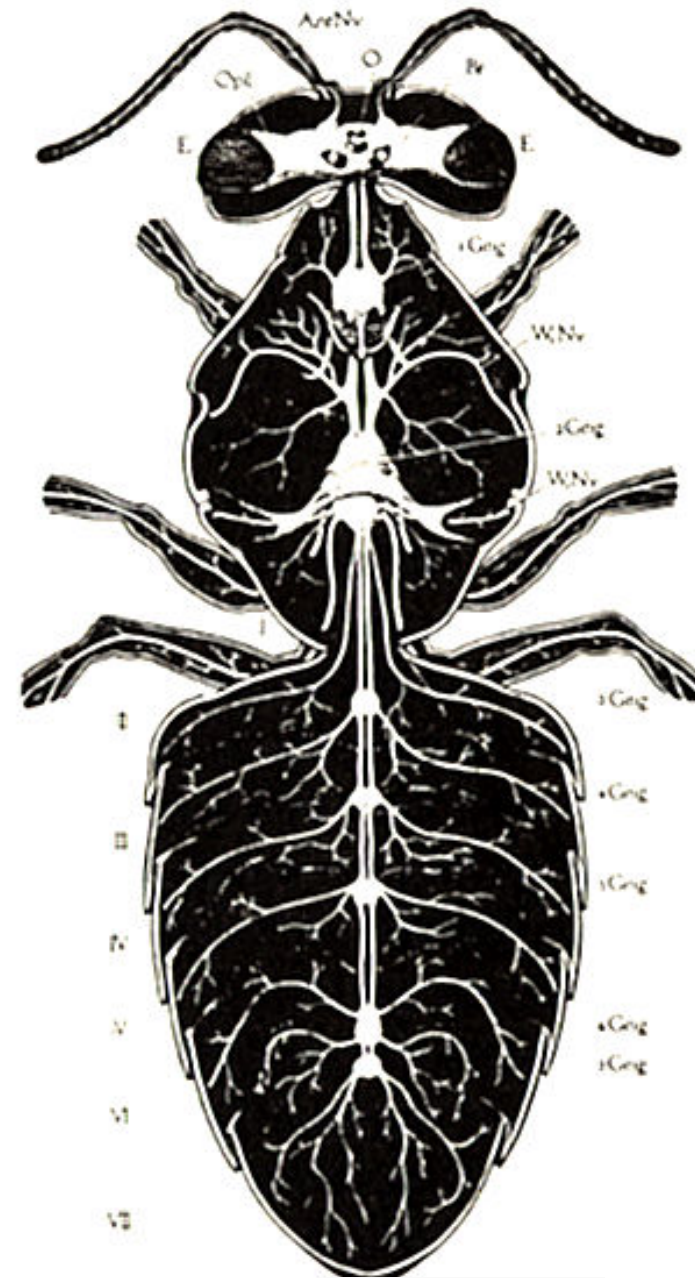




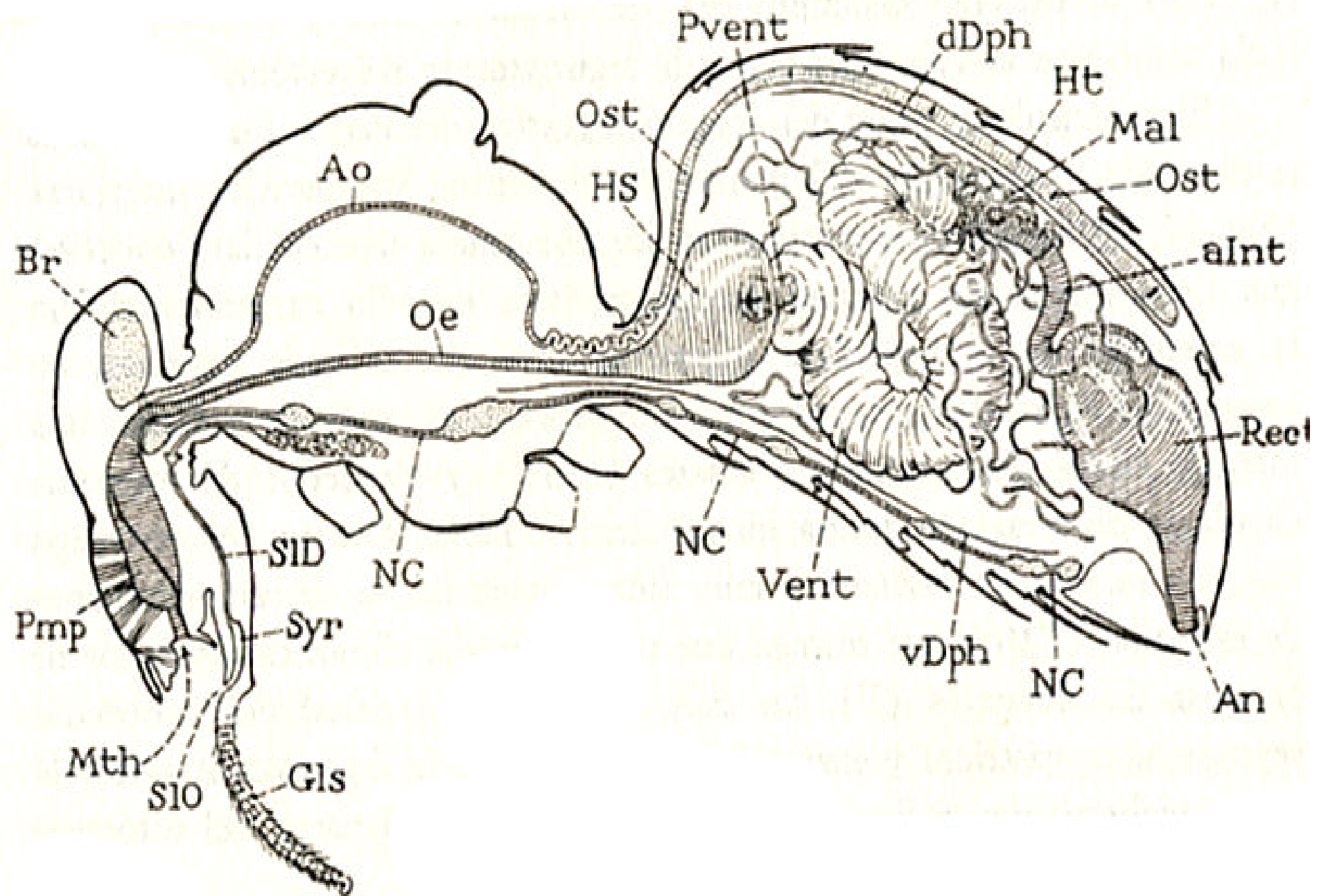


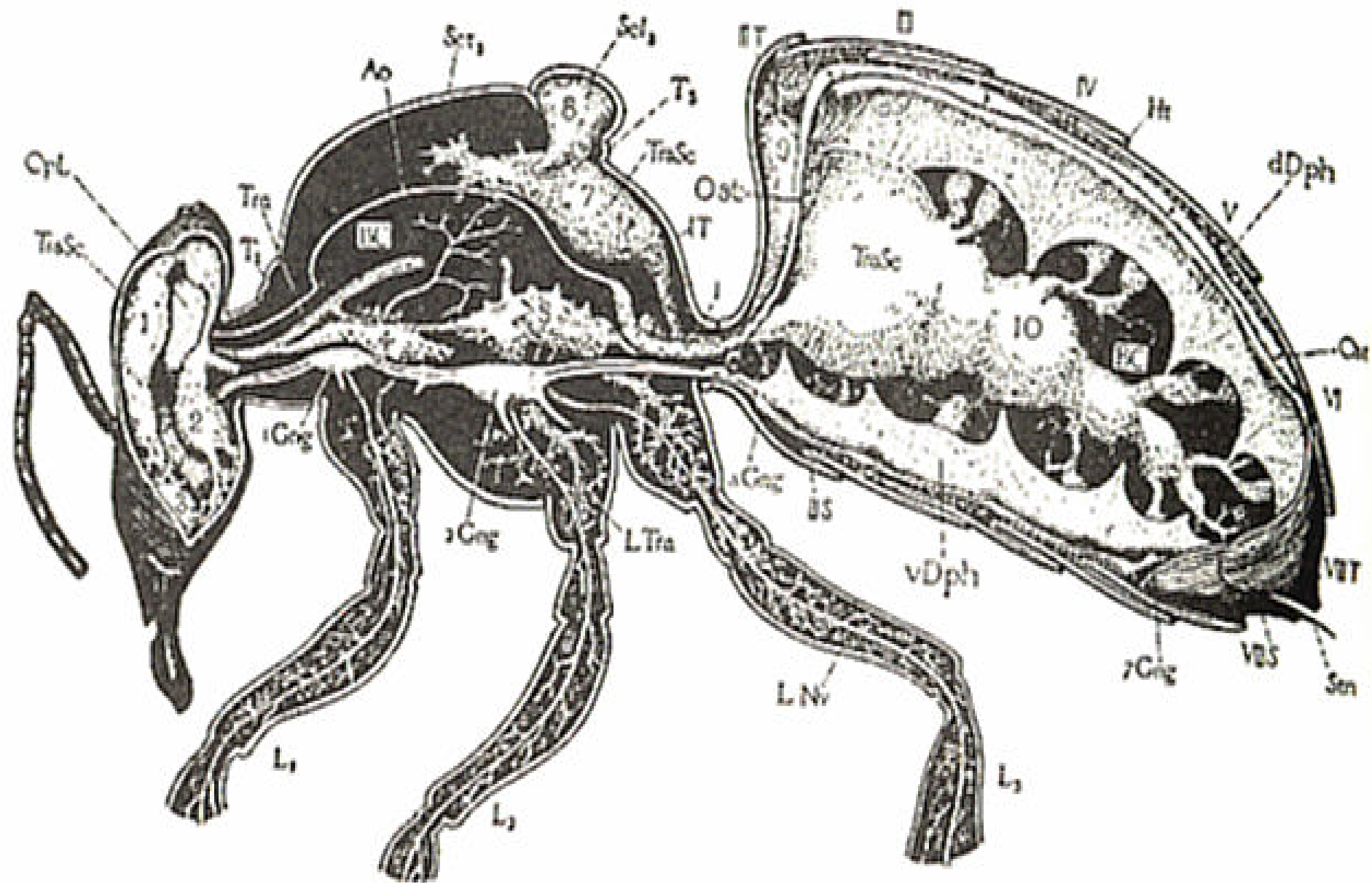


Sis. Respiratorio



Sis. Nervioso





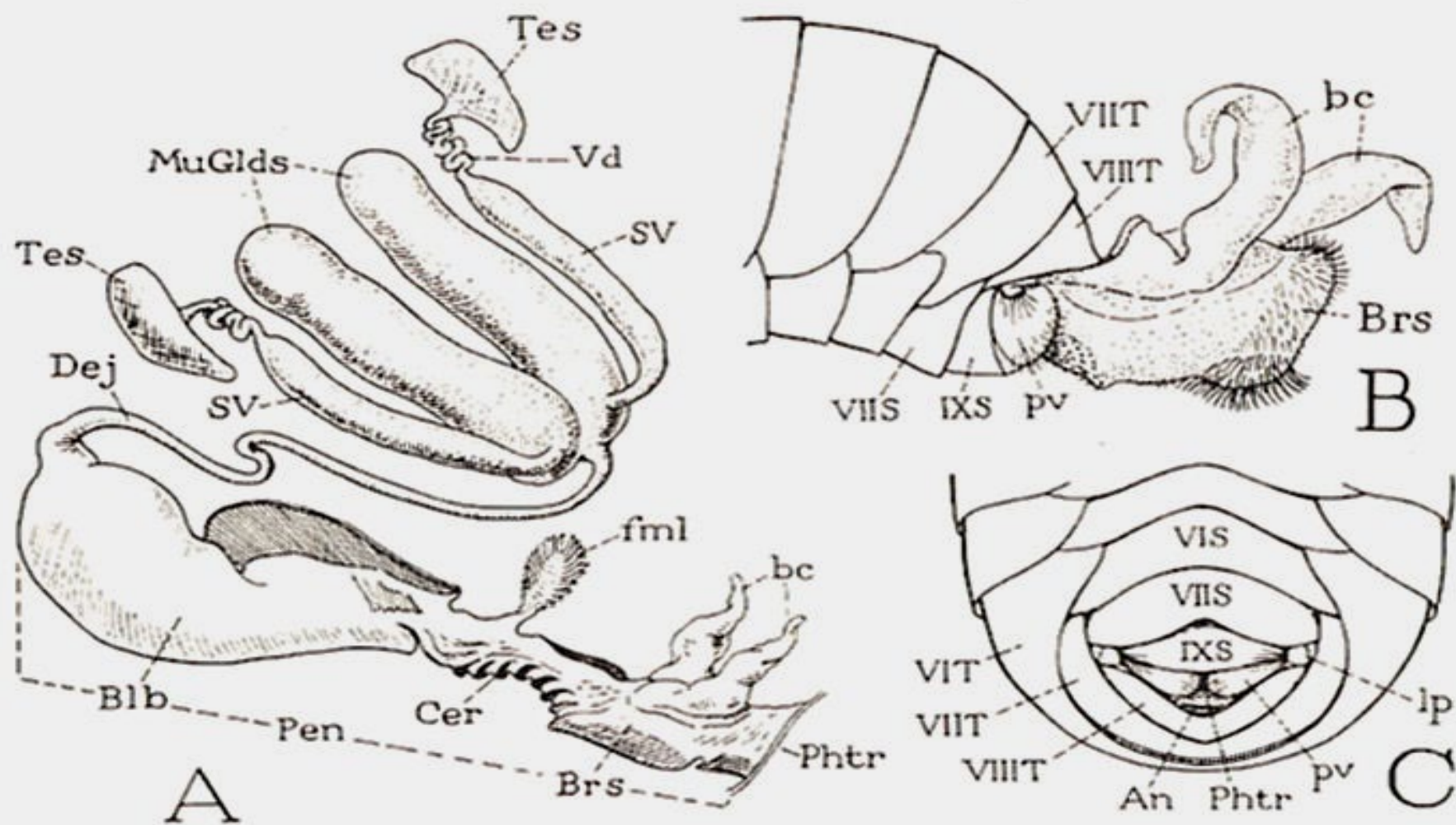


FIGURA 21. Los órganos de reproducción del zángano.

A, vista general de los órganos internos de reproducción vistos del lado izquierdo. B, extremo del abdomen del zángano con el pene parcialmente evertido. C, extremo del abdomen del zángano, superficie inferior (pene sin evertir).

An, ano; bc, saquitos copulatorios del pene; Blb, bulbo del pene; Brs, bursa del pene; Cer, cuello (cervix) del pene; Dej, conducto eyaculador; fml, lóbulo laciniado; lp, placa parameral; MuGlds, glándulas mucosas; Pen, pene; Phtr, abertura externa del pene evertido; Pv, válvula de pene; SV, vesícula seminal; Tes, testículos; Vd, conducto deferente; VI S-IX S, placas esternas del abdomen; VI T-VIII T, placas tergaes del abdomen.

