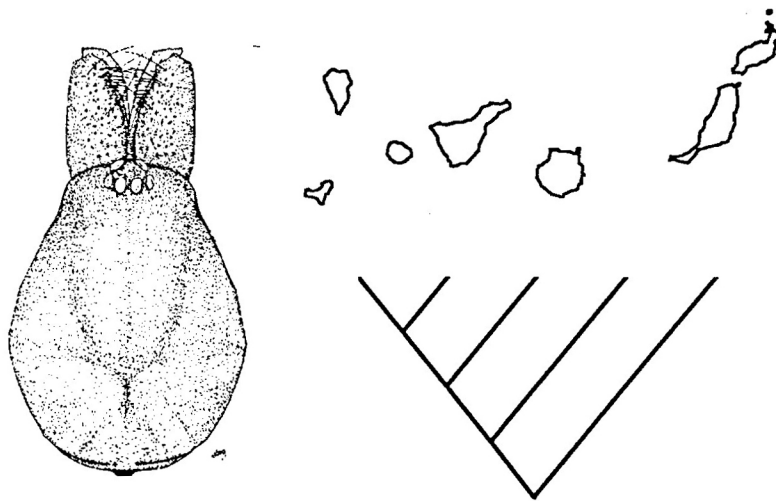


Departament de Biologia Animal  
Facultat de Biologia  
Universitat de Barcelona

Tesi Doctoral

COLONITZACIÓ I RADIACIÓ  
DEL GÈNERE *Dysdera* (ARACHNIDA, ARANEAE)  
A LES ILLES CANÀRIES



Miquel Àngel Arnedo Lombarte

1998

- Schmidt, G. 1975. Spinnen von Teneriffa. Zool. Beitr., 27:501-515.
- Schmidt, G. 1981. Zur Spinnen-fauna von La Gomera. Zool. Beitr., 27:85-107.
- Simon, E. 1883. Études Arachnologiques XIV Mè., matériaux pour servir a la faune arachnologique des Îles de l'Océan Atlantique. Ann. Soc. ent. Fr., 6:294-298.
- Simon, E. 1907. Étude sur les Araignées de la sous-section des Haplogynes. Ann. Soc. ent. Belg., 51:246-264.
- Strand, E. 1908. Diagnosen neuer aussereuropäischer Spinnen. Zool. Anz., 32:769-773.
- Wheeler, Q.D. & K.C. Nixon. 1990. Another way of looking at the species problem: A reply to De Queiroz and Donaghue. Cladistics, 6:77-81.
- Wunderlich, J. 1987. Die Spinnen der Kanarischen Inseln und Madeiras. Taxon. Ecol., 1:1-435.
- Wunderlich, J. 1991. Die Spinnen-fauna der Makaronesischen Inseln. Beitr. Araneol., 1:1-619.
- Wunderlich, J. 1994. Zu Ökologie, Biogeographie, Evolution und Taxonomie einiger Spinnen der Makaronesischen Inseln. Beitr. Araneol., 4:385-439.

TABLES

Table 1.-Abbreviations used in text and figures (Figs. 2-9).

---

*Eyes*

*AME* anterior medial eyes

*PME* posterior medial eyes

*PLE* posterior lateral eyes

*Cheliceral teeth*

*B* basal tooth

*M* medial tooth

*D* distal tooth

*Male copulatory bulbus*

*T* tegulum

*DD* distal division

*IS* internal sclerite

*ES* external sclerite

*DH* distal haematodoca

*C* crest

*AC* additional crest

*LF* lateral fold over L, between internal and external sclerites

*L* lateral sheet

*AL* additional lateral sheet at back internal border

*P* posterior apophysis

*Female genitalia* (Figs. 2 A-D)

*DA* dorsal arch

*DF* dorsal fold

*MF* major fold

*S* spermatheca

*TB* transversal bar

*V* bursal valve

*VA* ventral arch

*AVD* additional ventral diverticle

*Spinnerets*

*ALS* anterior lateral spinnerets

*PMS* posterior medial spinnerets

*PLS* posterior lateral spinnerets

*MS* major ampulate gland spigot

*PS* polar pyriform gland spigot

---



***El gènere Dysdera a les illes Canàries***

Table 2.-Intraspecific spination variability of *Dysdera ambulotenta*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	1.0-2.1	1.0-2.0-1	0	1.0.1
Tibia 4 dorsal	0-1.0.0-1	1.0-3.1	0-1.0-3.0-1	1.0.1
Tibia 3 ventral	1.1-3.1	1.1-2.1	0	1.0.0-1
Tibia 4 ventral	1.1-2.1	1.1-2.1	0-2.0-2.1-2	0-1.0-2.1
	Number of rows		Number of spines	
Femur 3 dorsal	2		0-3/0-1	
Femur 4 dorsal	2		0-4/0-4	

Table 3.-Intraspecific spination variability of *Dysdera brevispina*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	0-1.0-2.1	0	0	1.0.0
Tibia 4 dorsal	1.1-2.1	0	0	1.0-1.1
Tibia 3 ventral	0-1.1-.2.0-1	0	0	1.0.0
Tibia 4 ventral	12-.3.0-1	0	0	1.0.0-1
	Number of rows		Number of spines	
Femur 3 dorsal		0		0
Femur 4 dorsal		1		0-1

***El gènere Dysdera a les illes Canàries***

Table 4.-Intraspecific spination variability of *Dysdera chioensis*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia Pdp dorsal	0	1.0.0	0	0
Tibia 3 dorsal	0-1.0-2.0-1	0-1.0-2.0-1	0.0-1.0	1.0-1.1
Tibia 4 dorsal	0.0-2.0-1	1.0-3.1	0	1.0-2.1
Tibia 1 ventral	0.0-1.0	0.0-2.0	0	0
Tibia 2 ventral	0	0.1-2.0	0	0
Tibia 3 ventral	0.0-2.0-1	1.2.0-1	0	1.0-1.0-1
Tibia 4 ventral	0-1.2.0-1	0-1.1-2.1	0-1.0-2.0	0-1.0-1.1

	Number of spines	
Patella Pdp dorsal		1-2
Patella 3 ventral		0-3
Patella 4 ventral		0-2

	Number of rows	Number of spines
Femur 1 frontal	1	1-2
Femur 2 frontal	1	2-3
Femur 3 dorsal	2	2-5/1-2
Femur 4 dorsal	2	1-2/5-9

Table 5.-Intraspecific spination variability of *Dysdera cribellata*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	1.0.1	0-1.0.0	0	1.0.0
Tibia 4 dorsal	1.0.1	0	0	0-1.0.0-1
Tibia 3 ventral	0-1.0-1.0	0	0	0-1.0.0
Tibia 4 ventral	0-1.1.0	0-1.0-1.0	0	0-1.0.0
	Number of rows		Number of spines	
Femur 3 dorsal		0		0
Femur 4 dorsal		0		0

***El gènere Dysdera a les illes Canàries***

Table 6.-Intraspecific spination variability of *Dysdera esquiveli*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	1.0.0-1	0-1.0-1.0	0	1.0.0-1
Tibia 4 dorsal	0-1.0.0	0-1.0-1.0-1	0	1.0.0-1
Tibia 3 ventral	0-1.0-1.0-1	0	0	0-1.0-1.0
Tibia 4 ventral	0-2.0-1.0	1.1.1	0-1.0-1.0-1	0-1.0.0-1
	Number of rows		Number of spines	
Femur 3 dorsal		1		0-1
Femur 4 dorsal		2		0-1/1-3
			Number of spines	
Patella 3 ventral				0-1
Patella 4 ventral				1-3

Table 7.-Intraspecific spination variability of *Dysdera gibbifera*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	1.1-2.1	0-1.0.0	0	1.0.0-1
Tibia 4 dorsal	0.0.1	1.0-1.1	1.0-1.0	1.0.1
Tibia 3 ventral	0-1.0.0	1.1.0-1	0	1.0-1.0
Tibia 4 ventral	1.1-2.1	1.0-1.0-1	0.1.0	1.0.1
	Number of rows		Number of spines	
Femur 3 dorsal	0		0	
Femur 4 dorsal	1		0-2	

***El gènere Dysdera a les illes Canàries***

Table 8.-Intraspecific spination variability of *Dysdera guayota*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	1.1-2.1	0	0	1.0.1
Tibia 4 dorsal	0.0.0-1	1.1.1	0	1.0.1
Tibia 3 ventral	1.1-2.0	0	0	1.0-1.0
Tibia 4 ventral	1.1.1	0-1.1.0	0	0-1.0.0-1
	Number of rows		Number of spines	
Femur 1 dorsal		1		1-2
Femur 2 dorsal		1		2-3
Femur 3 dorsal		2		1-10/0-9
Femur 4 dorsal		2		1-4/4-7

Table 9.-Intraspecific spination variability of *Dysdera hernandezi*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	0	0	0	1.0.0
Tibia 4 dorsal	0	0	0	0.0.1
Tibia 3 ventral	0	0	0	0
Tibia 4 ventral	1.0-1.0	0	0	1.0.0



***El gènere Dysdera a les illes Canàries***

Table 10.-Intraspecific spination variability of *Dysdera labradaensis*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	0-1.0-1.0-1	0-1.0-2.0-1	1.0-1.0-1	1.0-1.1
Tibia 4 dorsal	1.2.1-2	1.1-3.1	1.0-1.1	1.1.1
Tibia 3 ventral	1.1.1	1.1.1	0	1.1.1
Tibia 4 ventral	0-1.0-2.1-2	1.1.1	1.1.1	1.1.1
Number of spines				
Patella 3 ventral			0-1	
Patella 4 ventral			0-1	
Number of rows				
Femur 1 frontal		1		3
Femur 2 frontal		1		1-2
Femur 3 dorsal		2		3-4(distal)/2-3(proximal)
Femur 4 dorsal		2		6-8 (distal)/2-3(proximal)

Table 11.-Intraspecific spination variability of *Dysdera macra* (hardly distinguishable from spine-like hairs).

---

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	0-1.0.0	0	0	1.0.0

---

***El gènere Dysdera a les illes Canàries***

---

Table 12.-Intraspecific spination variability of *Dysdera minutissima*.

---

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	1.0.0	0	0	1.0.0
Tibia 4 dorsal	0.0.0-1	0	0	0.0.0-1
Tibia 3 ventral	0	0	0	0
Tibia 4 ventral	0.0-1.0	0	0	0

---

Table 13.-Intraspecific spination variability of *Dysdera montanetensis*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	1.1-2.0-1	0.1-2.0-1	0	1.0.0-1
Tibia 4 dorsal	0-1.0-1.1	1.1-2.1	0	1.1-2.1
Tibia 3 ventral	1.2.0-1	0	0	1.0-1.0-1
Tibia 4 ventral	1.1.1	0-1.0-1.0-1	0.0-2.0-1	1.0-1.1
	Number of rows		Number of spines	
Femur 3 dorsal	1		0-1	
Femur 4 dorsal	1		1-4	

***El gènere Dysdera a les illes Canàries***

Table 14.-Intraspecific spination variability of *Dysdera propinqua*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	1.0-1.0-1	0	0	1.0.0
Tibia 4 dorsal	0-1.0.1	0	0	0.0.1
Tibia 3 ventral	0.0-1.0	0	0	0
Tibia 4 ventral	0.0-1.0	0	0	0
	Number of rows		Number of spines	
Femur 3 dorsal		0		0
Femur 4 dorsal		2		0-1/1-4

Table 15.-Intraspecific spination variability of *Dysdera unguimmani*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	0-1.0.0	0	0	0-1.0.0-1
Tibia 4 dorsal	1.0.1	0	0	1.0.1
Tibia 3 ventral	0	0	0	0-1.0.0
Tibia 4 ventral	0	0	0	0-1.0.0-1

***El gènere Dysdera a les illes Canàries***

---

Table 16.-Intraspecific spination variability of *Dysdera volcania*.

	Proximal	Med.-Proximal	Medial-Distal	Distal
Tibia 3 dorsal	1.0.1	0	0	1.0.0
Tibia 4 dorsal	0.0.1	1.0-1.1	0	1.0.1
Tibia 3 ventral	1.1.0	0	0	1.0.0
Tibia 4 ventral	1.1.1	0	0	1.0.1

FIGURES

Figure 1.-Maps showing: the biogeographical region of Macaronesia, the Canary Islands and Tenerife with its oldest areas encircled.

Figures 2-9.- Diagrams showing the characters included in the abbreviations list (Table 1). 2, Head , dorsal view; 3, Left chelicera, ventral view; 4, Right copulatory bulbus, frontal view; 5, Copulatory bulbus, external view; 6, Copulatory bulbus, posterior view; 7, Endogyne, ventral view; 8, Endogyne, dorsal view; 9, Endogyne, transverse section.

Figures 10-15.-*Dysdera ambulotenta*. 10, Carapace, dorsal; 11, Left chelicera, ventral; 12, Left male bulbus, external; 13, Endogyne, dorsal; 14 Endogyne, ventral; 15, Endogyne lateral. Scale bars in mm.

Figures 16-19.-*Dysdera ambulotenta*, right male bulbus. 16, DD frontal; 17, DD external; 18, DD internal; 19, P internal view.

Figures 20-21.-*Dysdera ambulotenta*, spinnerets. 20, Right ALS; 21, Right PLS.

Figures 22-27.-*Dysdera brevisetae*. 22, Carapace, dorsal; 23, Left chelicera, ventral; 24, Right male bulbus, external; 25, Endogyne, dorsal; 26 Endogyne, ventral; 27, Endogyne lateral. Scale bars in mm.

Figures 28-31.-*Dysdera brevisetae*, right male bulbus. 28, DD frontal; 29, DD external; 30, DD posterior; 31, P external.

Figures 32-33.-*Dysdera brevisetae*, spinnerets. 32, Right ALS; 33, Right PLS.

Figures 34-39.-*Dysdera brevispina*. 34, Carapace, dorsal; 35, Left chelicera, ventral; 36, Right male bulbus, external; 37, Endogyne, dorsal; 38 Endogyne, ventral; 39,



## El gènere *Dysdera* a les illes Canàries

---

Endogyne lateral. Scale bars in mm.

Figures 40-43.-*Dysdera brevispina*, right male bulbus. 40, DD frontal; 41, DD external; 42, DD posterior; 43, P external.

Figures 44-45.-*Dysdera brevispina*, spinnerets. 44, Right ALS; 45, Right PLS.

Figures 46-50.-*Dysdera chioensis*. 46, Carapace, dorsal; 47, Left chelicera, ventral; 48, Endogyne, dorsal; 49 Endogyne, ventral; 50, Endogyne lateral. Scale bars in mm.

Figures 51-52.-*Dysdera chioensis*, spinnerets. 51, Right ALS; 52, Right PLS.

Figures 53-58.-*Dysdera cribellata*. 53, Carapace, dorsal; 54, Right chelicera, ventral; 55, Left male bulbus, external; 56, Endogyne, dorsal; 57 Endogyne, ventral; 58, Endogyne lateral. Scale bars in mm.

Figures 59-62.-*Dysdera cribellata*, right male bulbus. 59, DD frontal; 60, DD external; 61, DD posterior; 62, P external.

Figures 63-64.-*Dysdera cribellata*, spinnerets. 63, Right ALS; 64, Right PLS.

Figures 65-67.-*Dysdera curvisetae*. 65, Carapace, dorsal; 66, Left chelicera, ventral; 67, Right male bulbus, external. Scale bars in mm.

Figures 68-71.-*Dysdera curvisetae*, right male bulbus. 68, DD frontal; 69, DD external; 70, DD posterior; 71, P external.

Figures 72-77.-*Dysdera esquiveli*. 72, Carapace, dorsal; 73, Left chelicera, ventral; 74, Left male bulbus, external; 75, Endogyne, dorsal; 76 Endogyne, ventral; 77, Endogyne lateral. Scale bars in mm.

Figures 78-81.-*Dysdera esquiveli*, right male bulbus. 78, DD frontal; 79, DD external; 80, DD posterior; 81, P external.

Figures 82-83.-*Dysdera esquiveli*, spinnerets. 82, Right ALS; 83, Right PLS.

Figures 84-86.-*Dysdera gibbifera*. 84, Carapace, dorsal; 85, Left chelicera, ventral; 86, Right male bulbus, external. Scale bars in mm.

Figures 87-90.-*Dysdera gibbifera*, right male bulbus. 87, DD frontal; 88, DD external; 89, DD posterior; 90, P external.

Figures 91-92.-*Dysdera gibbifera*, spinnerets. 91, Right ALS; 92, Right PLS.

Figures 93-94.-*Dysdera gollumi*, spinnerets. 93, Right ALS; 94, Right PLS.

Figures 95-100.-*Dysdera guayota* new species. 95, Carapace, dorsal; 96, Left chelicera, ventral; 97, Right male bulbus, external; 98, Endogyne, dorsal; 99 Endogyne, ventral; 100, Endogyne lateral. Scale bars in mm.

Figures 101-104.-*Dysdera guayota* new species, right male bulbus. 101, DD frontal; 102, DD external; 103, DD posterior; 104, P internal.

Figures 105-106.-*Dysdera guayota* new species, spinnerets. 105, Right ALS; 106, Right PLS.

Figures 107-111.-*Dysdera hemandezii* new species. 107, Carapace, dorsal; 108, Left chelicera, ventral; 109, Endogyne, dorsal; 110 Endogyne, ventral; 111, Endogyne lateral. Scale bars in mm.

Figures 112-113.-*Dysdera hemandezii* new species, spinnerets. 112, Right ALS; 113, Right PLS.

***El gènere Dysdera a les illes Canàries***

---

Figures 114-118.-*Dysdera labradaensis*. 114, Carapace, dorsal; 115, Left chelicera, ventral; 116, Endogyne, dorsal; 117 Endogyne, ventral; 118, Endogyne lateral. Scale bars in mm.

Figures 119-120.-*Dysdera labradaensis*, spinnerets. 119, Right ALS; 120, Right PLS.

Figures 121-127.-*Dysdera macra*. 121, Carapace, dorsal; 122, Carapace, lateral; 123, Left chelicera, ventral; 124, Right male bulbus, external; 125, Endogyne, dorsal; 126 Endogyne, ventral; 127, Endogyne lateral. Scale bars in mm.

Figures 128-131.-*Dysdera macra*, right male bulbus. 128, DD frontal; 129, DD external; 130, DD posterior; 131, P external.

Figures 132-133.-*Dysdera macra*, spinnerets. 132, Right ALS; 133, Right PLS.

Figures 134-138.-*Dysdera minutissima*. 134, Carapace, dorsal; 135, Left chelicera, ventral; 136, Left male bulbus, external; 137, Endogyne, dorsal; 138 Endogyne, ventral. Scale bars in mm.

Figures 139-142.-*Dysdera minutissima*, right male bulbus. 139, DD frontal; 140, DD external; 141, DD posterior; 142, P external.

Figures 143-144.-*Dysdera minutissima*, spinnerets. 143, Right ALS; 144, Right PLS.

Figures 145-150.-*Dysdera montanetensis*. 145, Carapace, dorsal; 146 Right chelicera, ventral; 147, Right male bulbus, internal; 148, Endogyne, dorsal; 149 Endogyne, ventral; 150, Endogyne lateral. Scale bars in mm.

Figures 151-154.-*Dysdera montanetensis*, right male bulbus. 151, DD frontal; 152, DD internal; 153, DD posterior; 154, P internal.

Figures 155-156.-*Dysdera montanetensis*, spinnerets. 155, Right ALS; 156, Right PLS.

Figures 157-162.-*Dysdera propinqua*. 157, Carapace, dorsal; 158, Left chelicera, ventral; 159, Right male bulbus, external; 160, Endogyne, dorsal; 161 Endogyne, ventral; 162, Endogyne lateral. Scale bars in mm.

Figures 163-167.-*Dysdera propinqua*, right male bulbus. 163, DD, frontal, LF absent; 164, DD, frontal, LF present; 165, DD external; 166, DD posterior; 167, P external.

Figures 168-169.-*Dysdera propinqua*, spinnerets. 168, Right ALS; 169, Right PLS.

Figures 170-174.-*Dysdera unguimmanis*. 170, Carapace, dorsal; 171, Left chelicera, ventral; 172, Endogyne, dorsal; 173 Endogyne, ventral; 174, Endogyne lateral. Scale bars in mm.

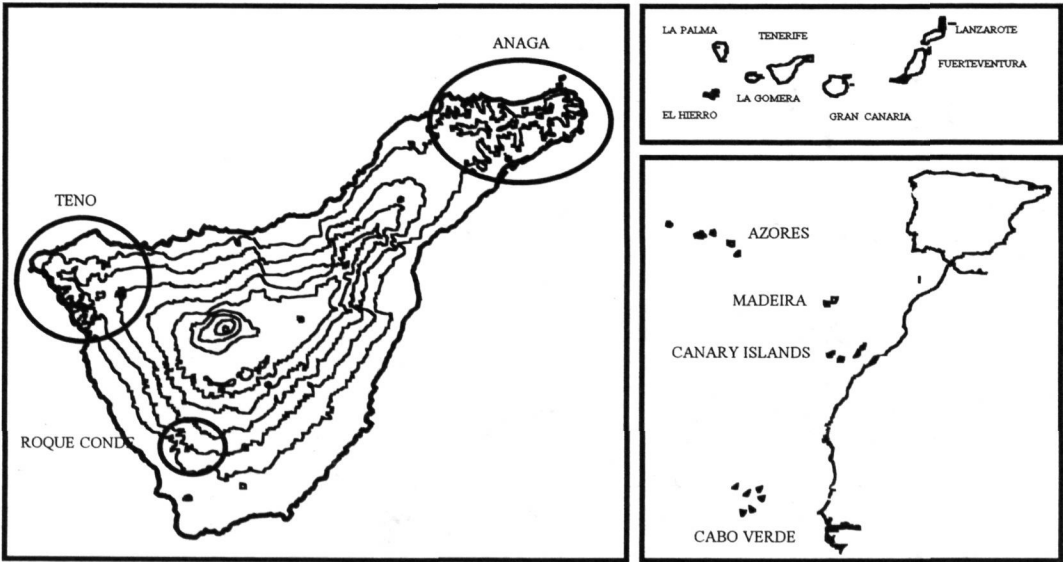
Figure 175.-*Dysdera unguimmanis*, leg1 claws.

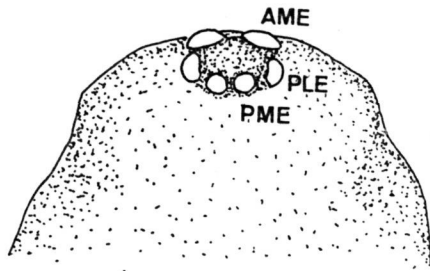
Figures 176-177.-*Dysdera unguimmanis*, spinnerets. 176, Right ALS; 177, Right PMS (upper), PLS (lower).

Figures 178-180.-*Dysdera volcania*. 178, Carapace, dorsal; 179, Left chelicera, ventral; 180, Left male bulbus, external. Scale bars in mm.

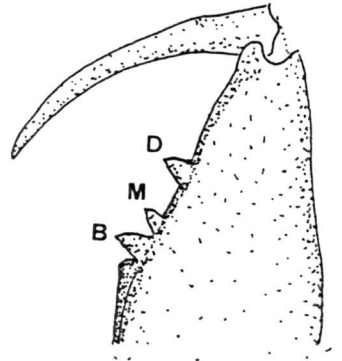
Figures 181-184.-*Dysdera volcania*, right male bulbus. 181, DD frontal; 182, DD external; 183, DD posterior; 184, P internal.

Figures 185-186.-*Dysdera volcania*, spinnerets. 184, Right ALS; 185, Right PMS (upper), PLS (lower).

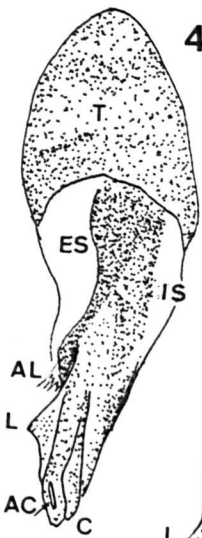




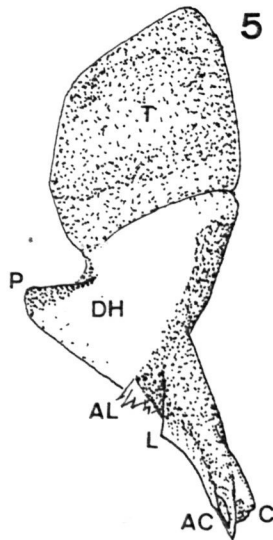
2



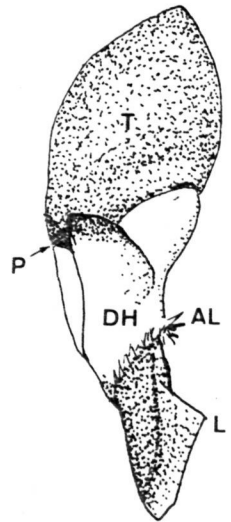
3



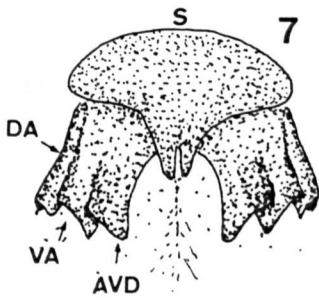
4



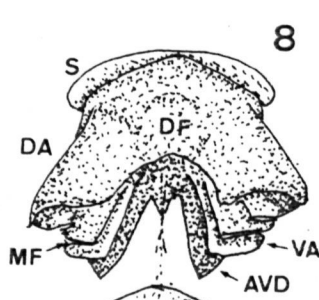
5



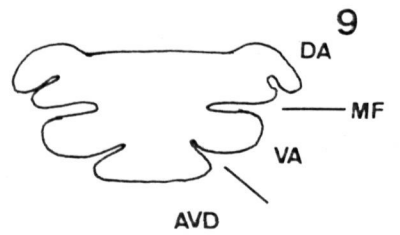
6



7



8



9

