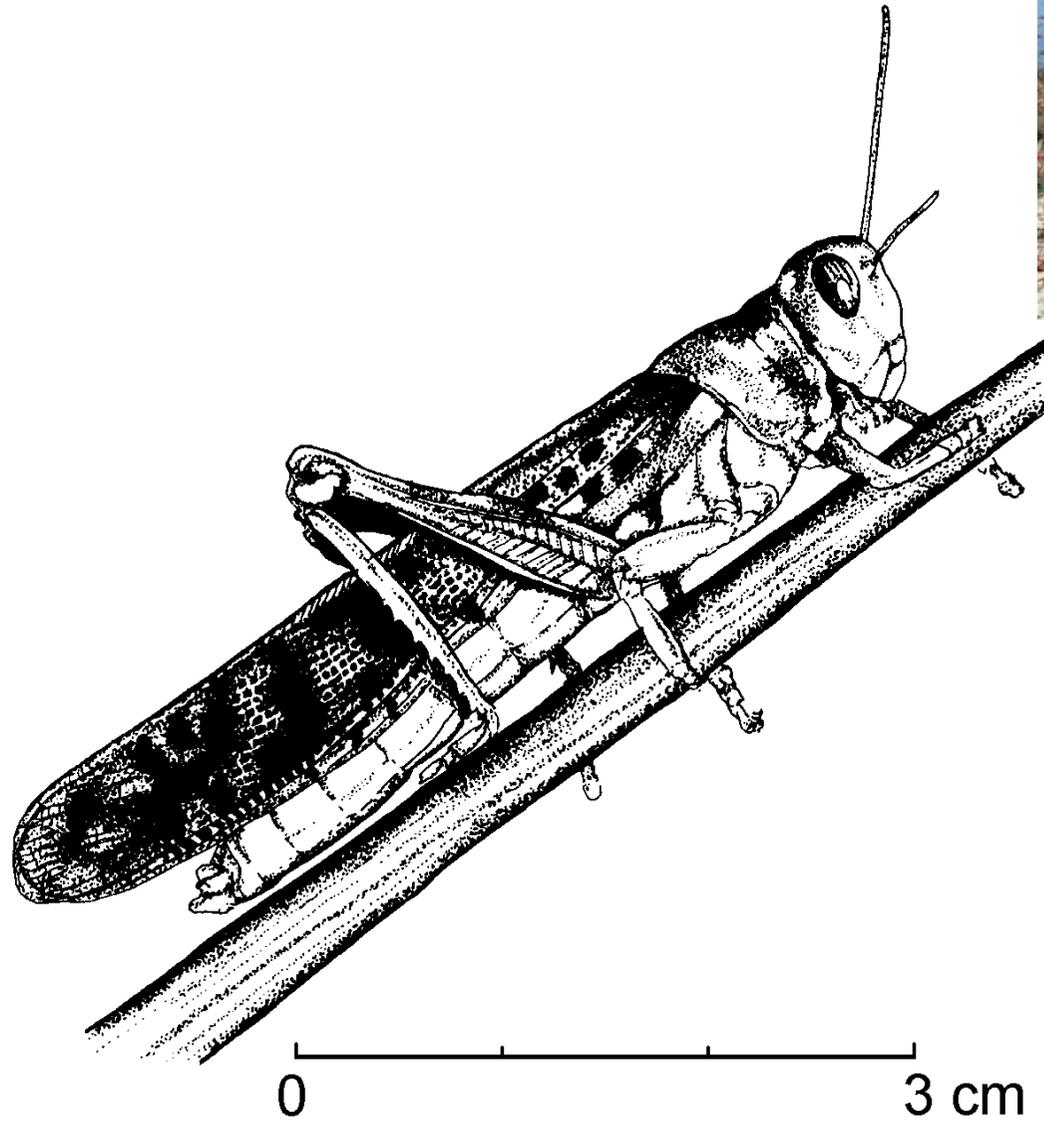


Dissection du Criquet



Pour en savoir plus :

<http://locust.cirad.fr/generalites/index.htm>

BCPST1, Lycée Hoche

Larves



Adultes



Solitaire

Grégaire (Ravageur)

Criquet pèlerin
Prévisions mondiales
Sep–Oct 2020



Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.



T. Benhalima



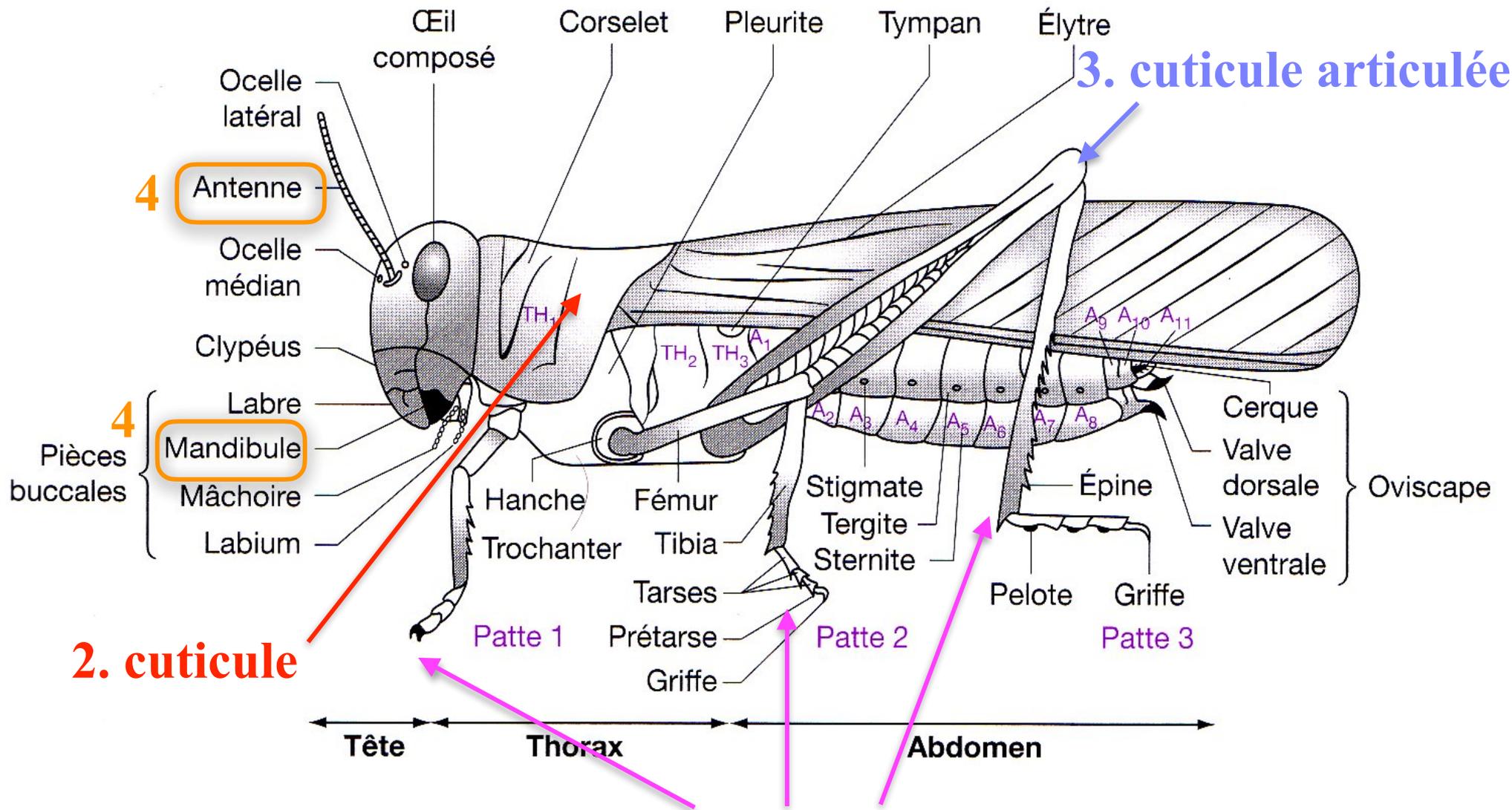
Une nuée de criquets pèlerins près de Nanyuki, au Kenya, le 21 février 2020. Baz Ratner / REUTERS

Morphologie générale



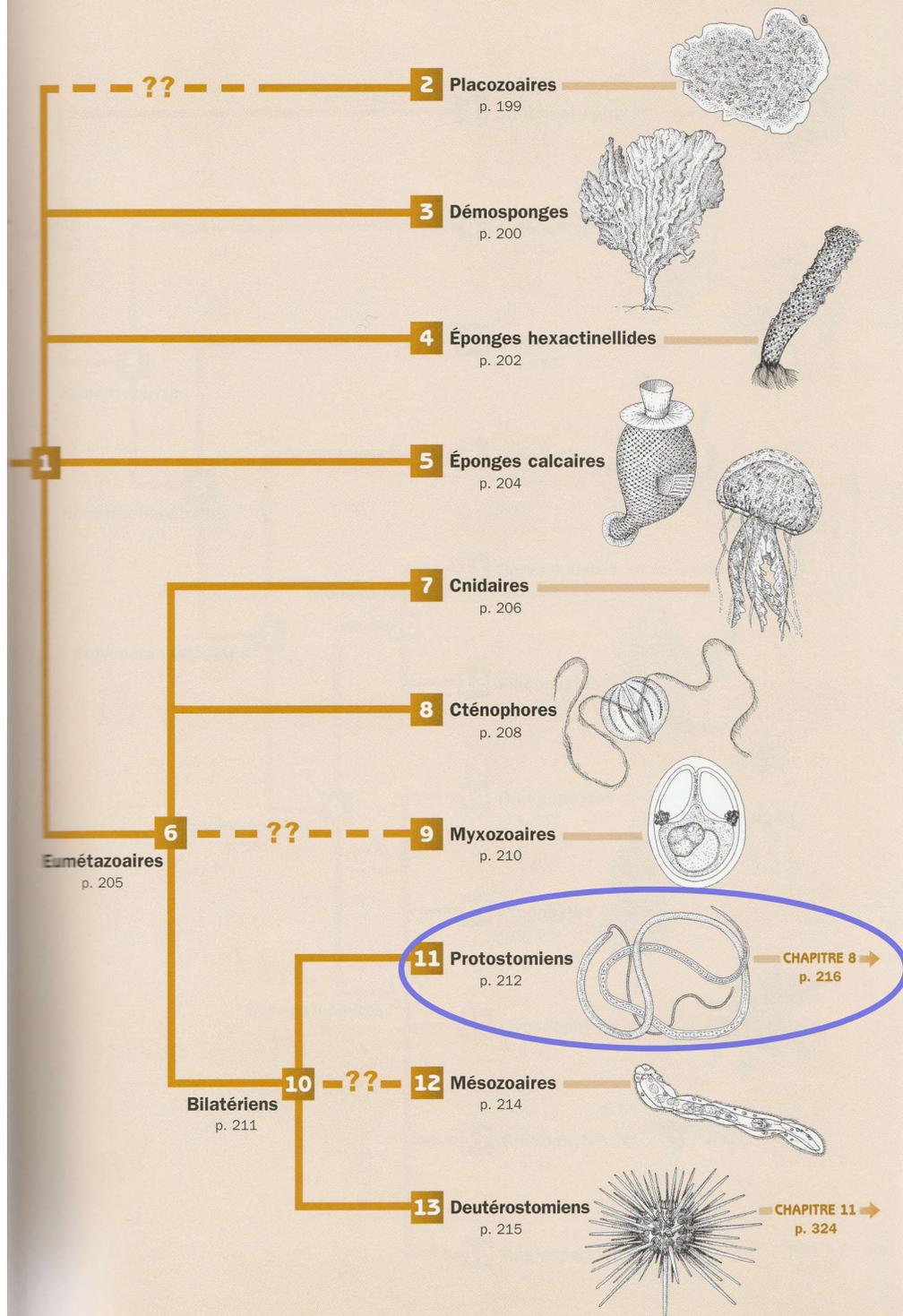
CARACTÈRES	⇒ POSITION SYSTÉMATIQUE
Animal pluricellulaire	Métazoaire
<ul style="list-style-type: none"> - <u>Symétrie bilatérale</u> (↔ 2 axes de polarité : antéro-postérieur et dorso-ventral) - 3 feuilletts embryonnaires 	<div style="border: 2px solid green; border-radius: 15px; padding: 5px; display: inline-block;">Bilatérien</div> Triploblastique
<ul style="list-style-type: none"> - Bouche percée en 1^{er}, sur l'emplacement du blastopore - Système nerveux ventral (par rapport au tube digestif) 	Protostomiens Hyponeuriens
<ul style="list-style-type: none"> - <u>Exosquelette</u> constitué d'une <u>cuticule rigide chitineuse</u> articulée - <u>Croissance par mue</u> (contrôlée par une hormone stéroïde, l'<u>ecdysone</u>) 	<div style="border: 2px solid red; border-radius: 15px; padding: 5px; display: inline-block;">Cuticulates = Ecdysozoaires (<i>ecdyso = mue</i>)</div>
<ul style="list-style-type: none"> - <u>Métamérie hétéronome</u> (corps divisé en une suite de segments spécialisés dans certaines fonctions) - <u>Appendices articulés</u> (une paire portée par chaque métamère) 	<div style="border: 2px solid blue; border-radius: 15px; padding: 5px; display: inline-block;">Embranchement = Phylum des Arthropodes</div>
<ul style="list-style-type: none"> - Antennes et Mandibules - Corps en 3 parties : Tête, Thorax, Abdomen 	<div style="border: 2px solid green; border-radius: 15px; padding: 5px; display: inline-block;">Antennates = Mandibulates (sous-embranchement)</div>

1. fil montrant l'axe de symétrie

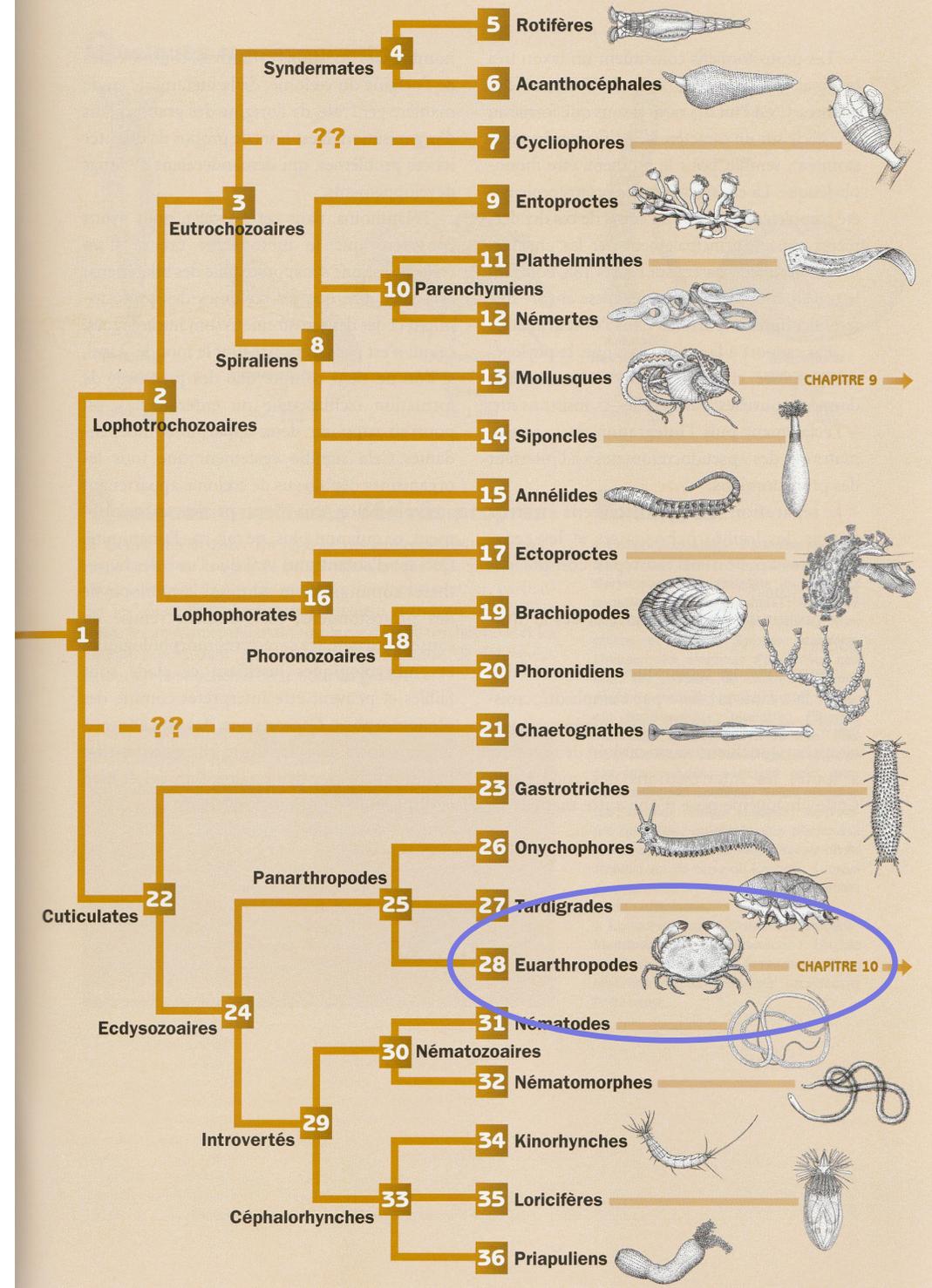


5. hexapode

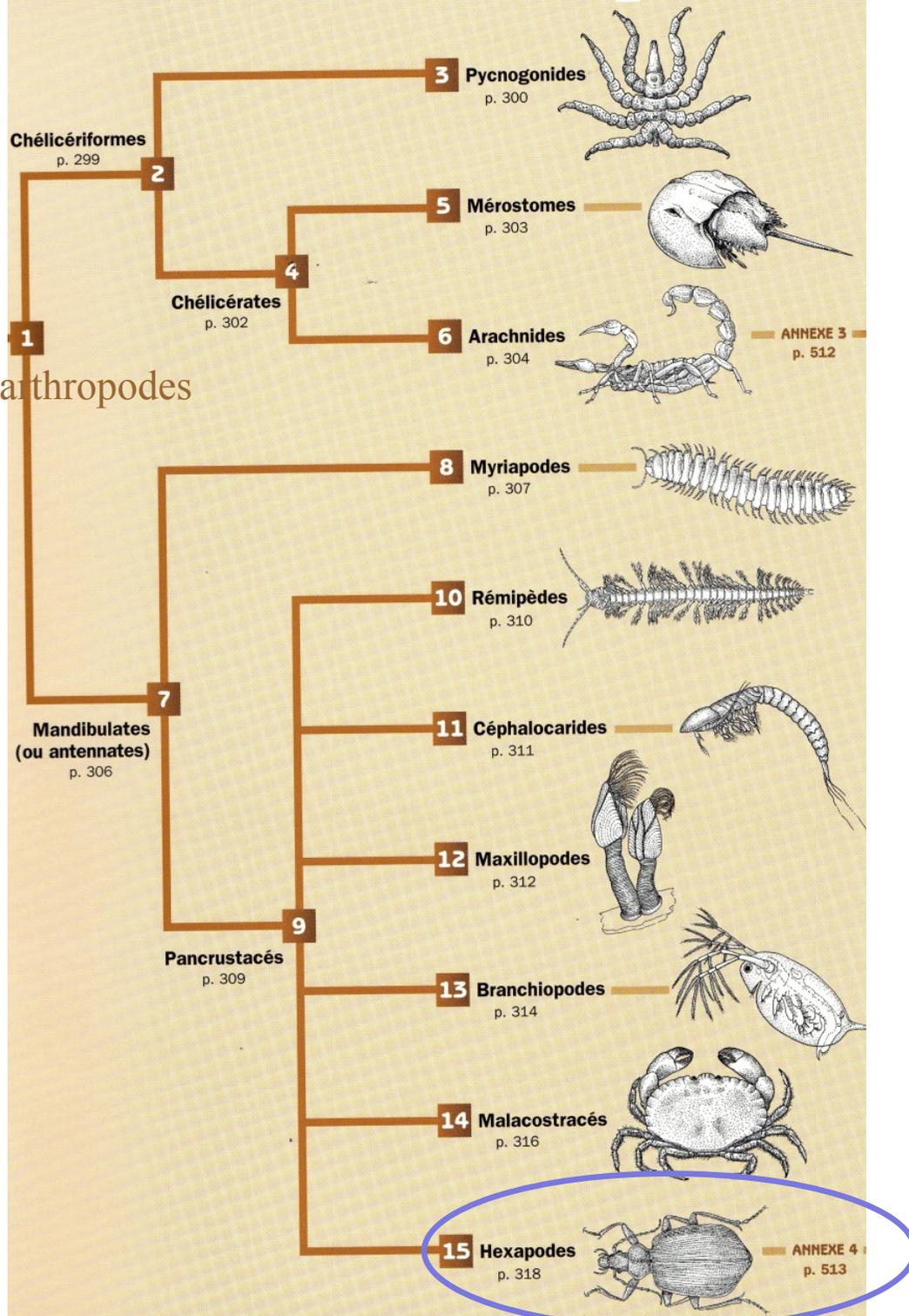
7. Métazoaires



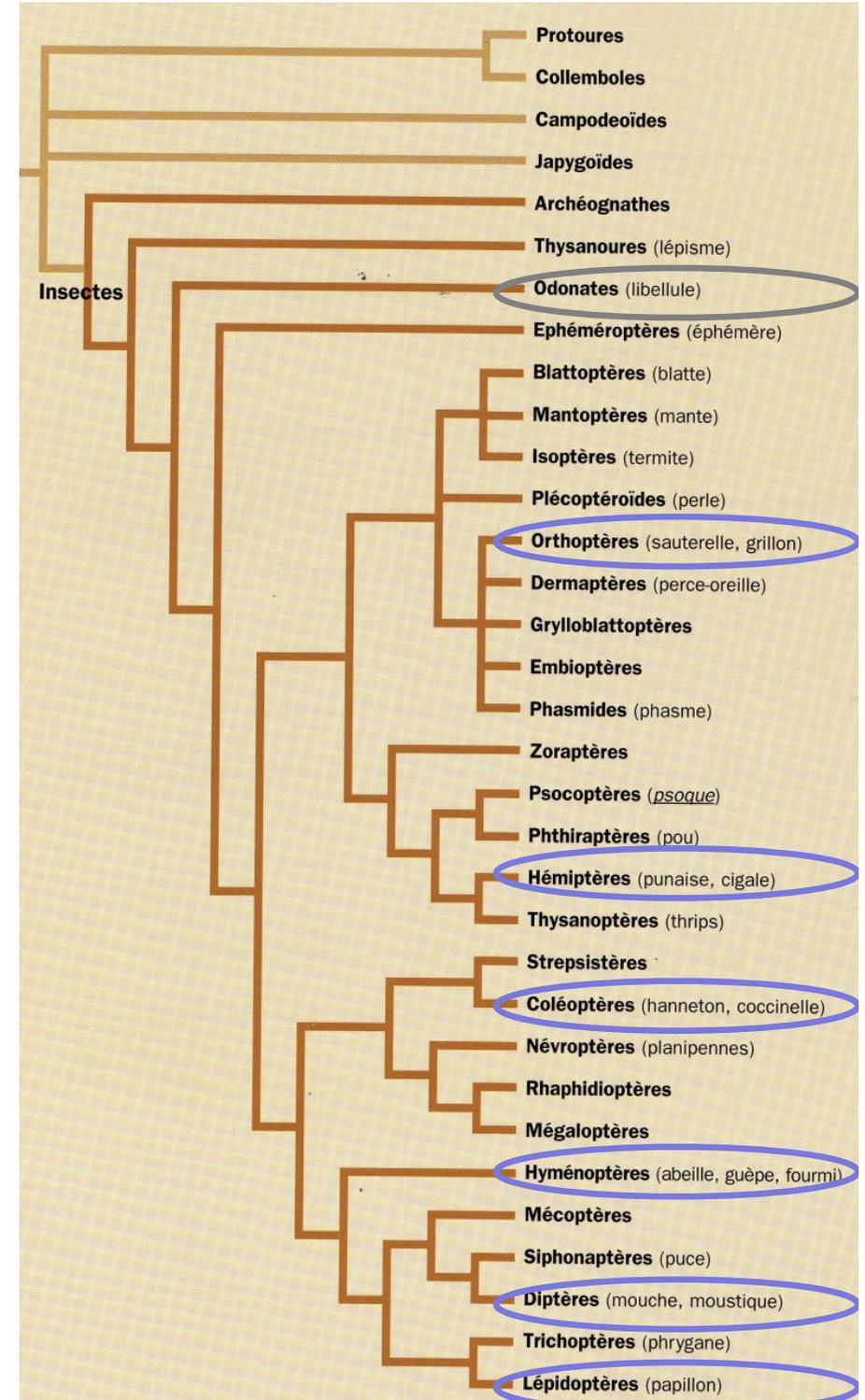
Protostomiens



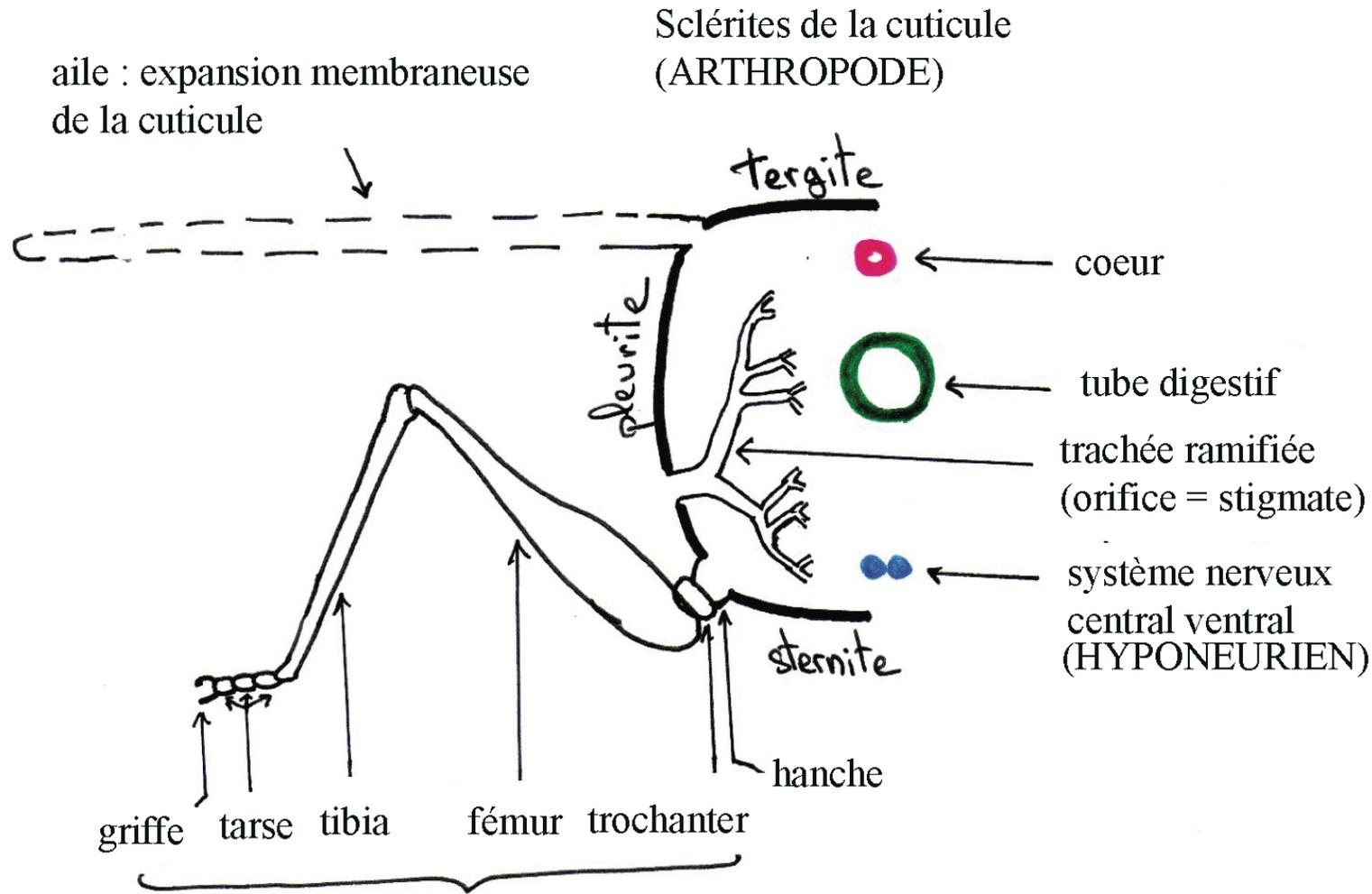
Eu-artropodes



Hexapodes



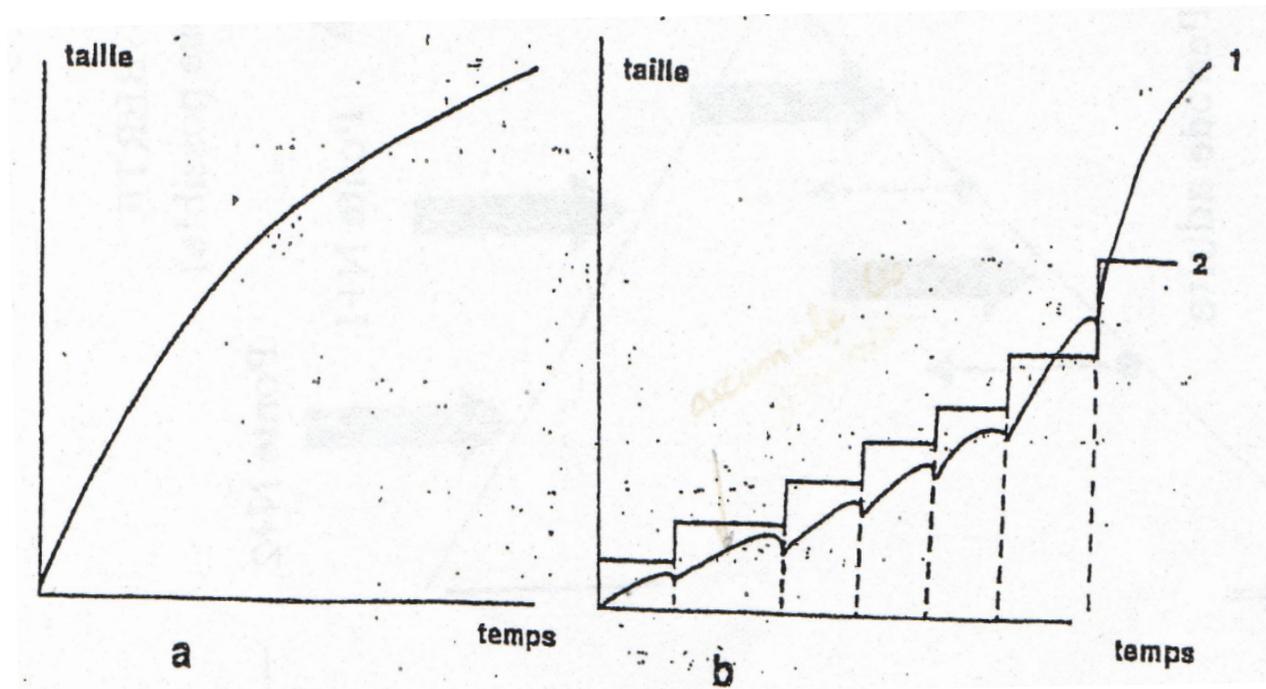
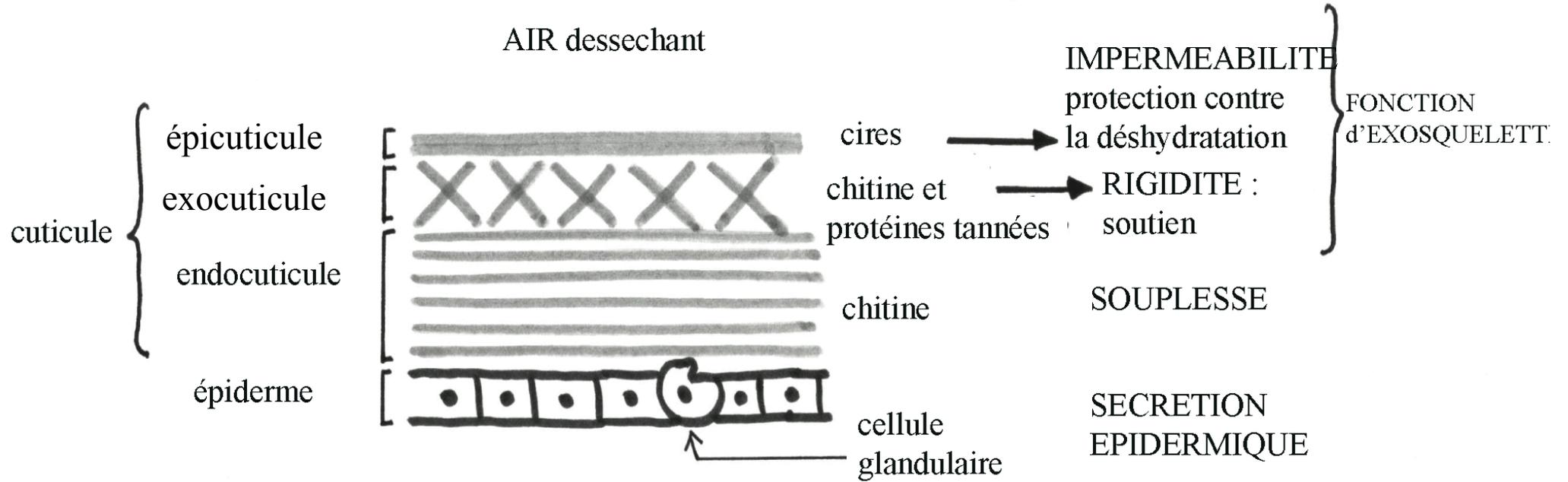
Plan d'organisation



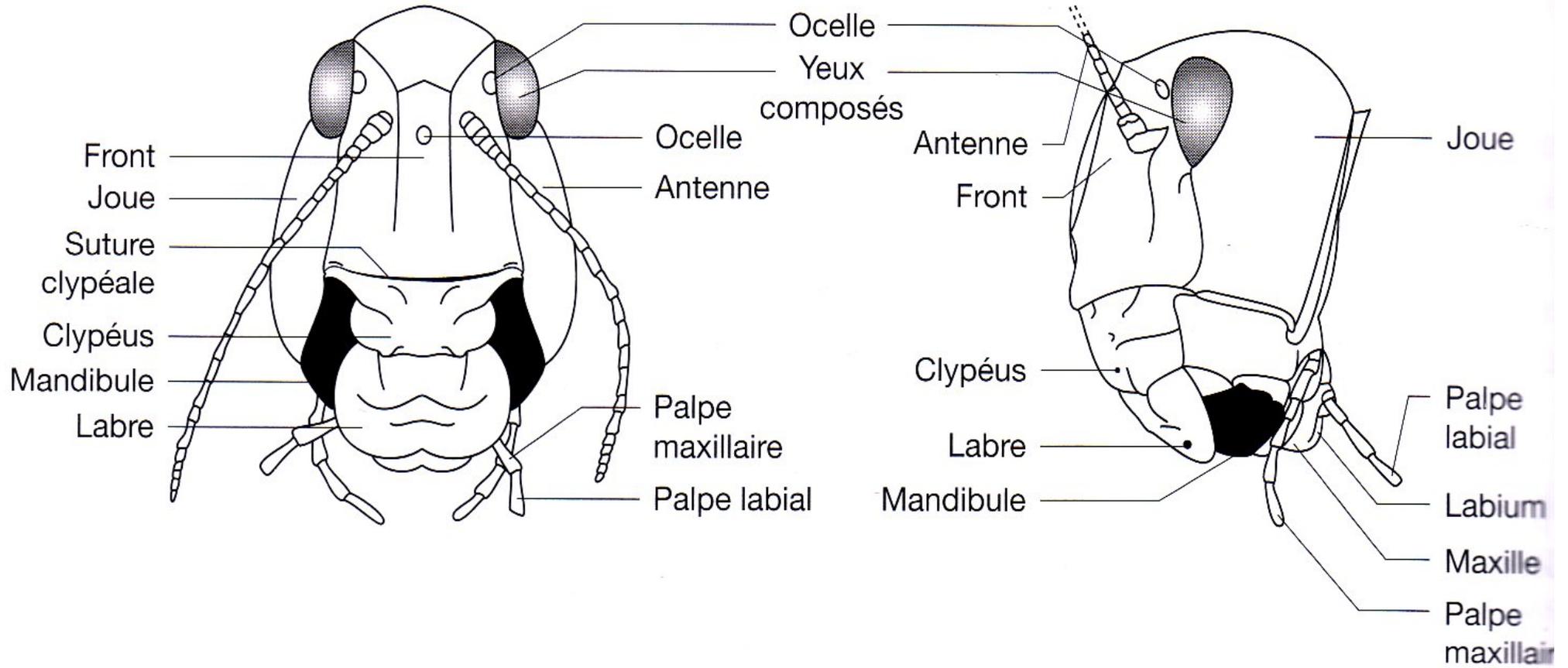
RESPIRATION
TRACHEENNE
(milieu aérien)

patte locomotrice
APPENDICE ARTICULE
(ARTHROPODE)

La cuticule des Insectes (Arthropodes) : un exosquelette



La tête



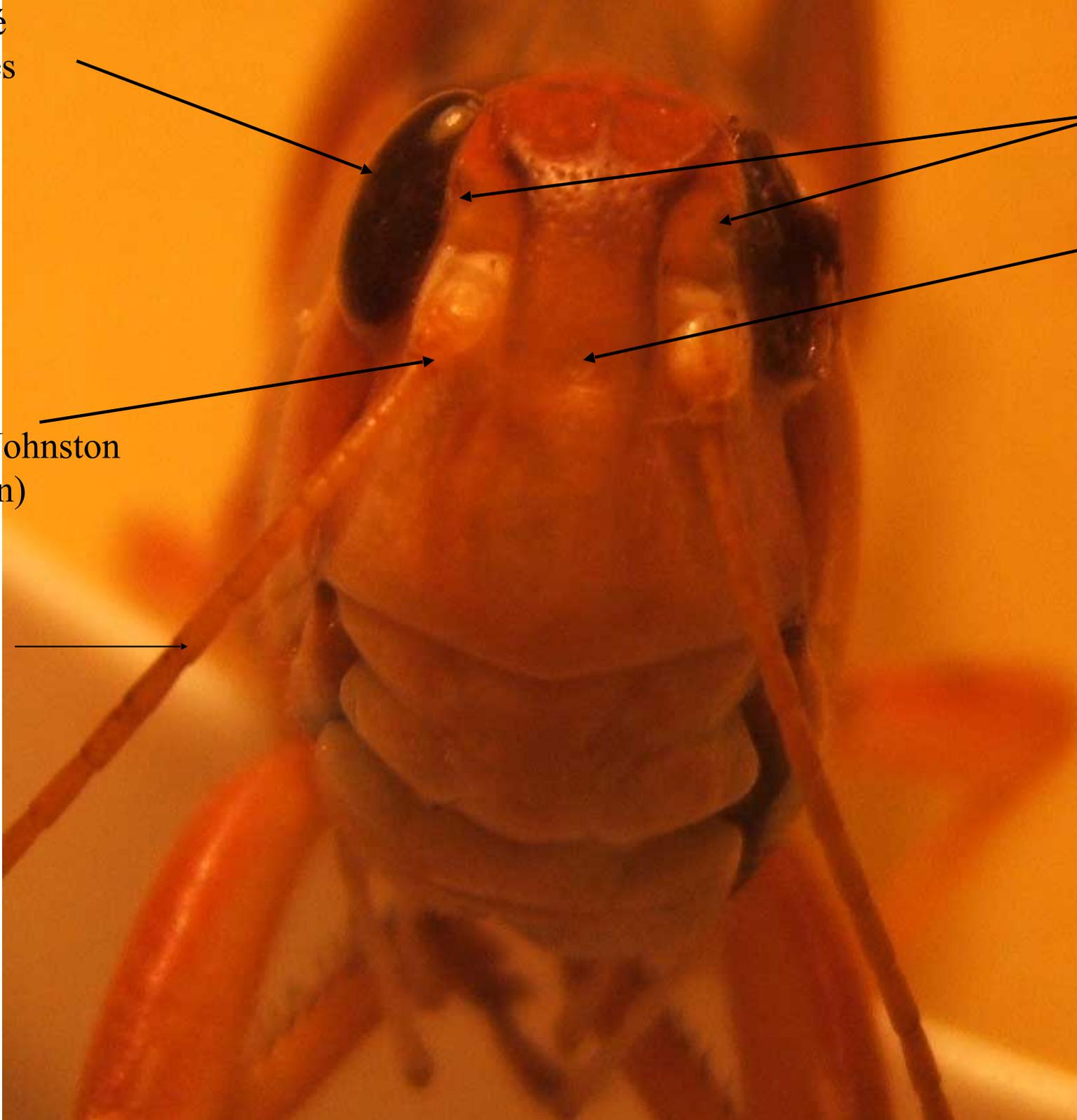
Œil composé
d'ommatidies

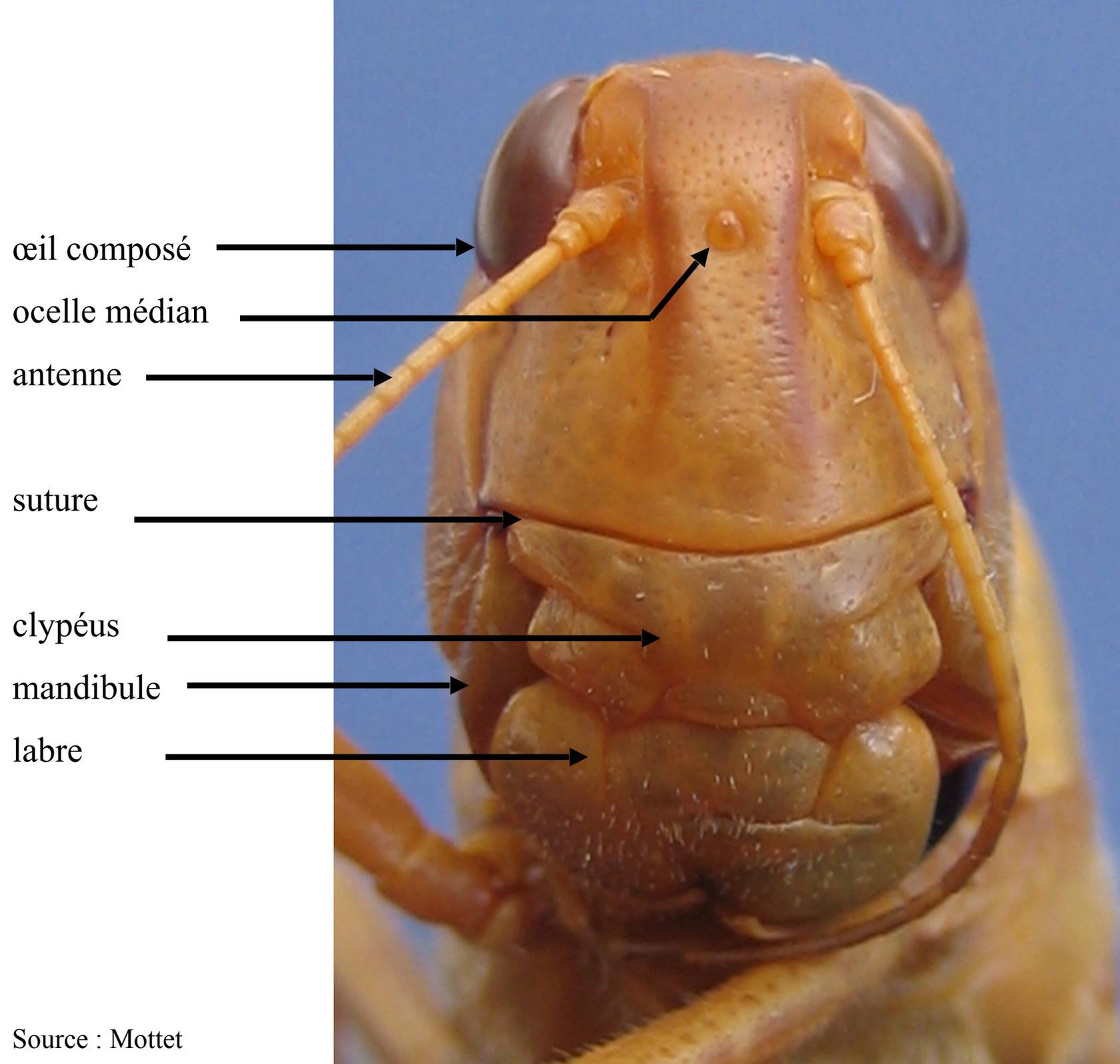
Ocelles
latéraux

Ocelle
médian

Organes de Johnston
(équilibre)

Antennes





œil composé



ocelle médian



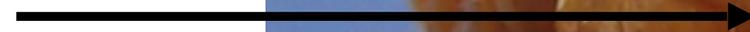
antenne



suture



clypéus

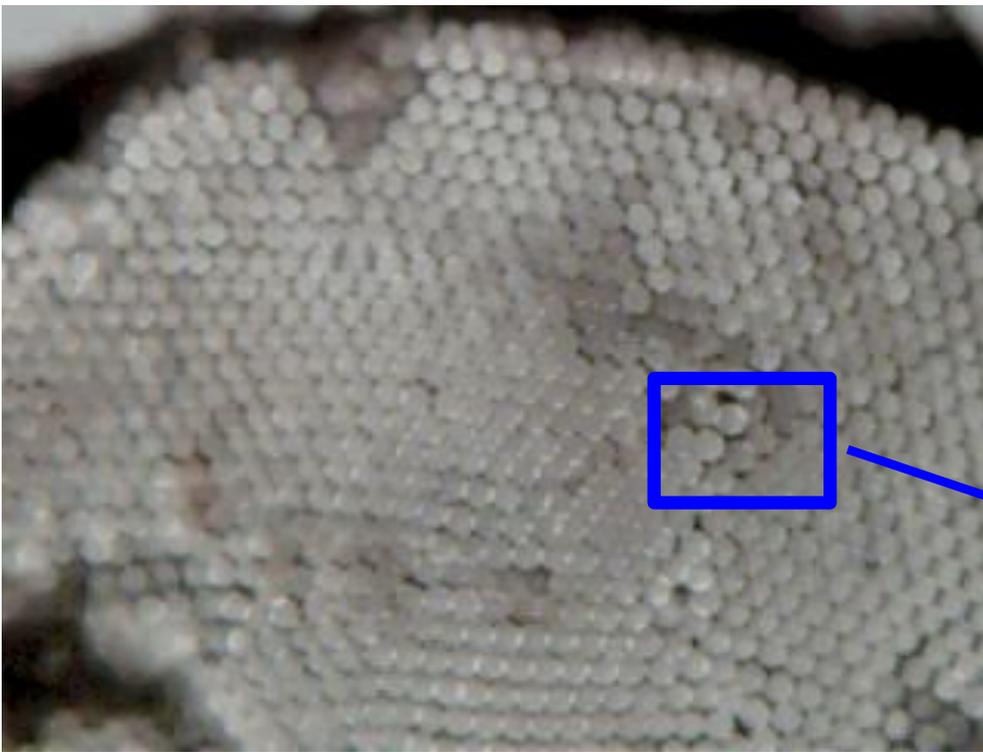


mandibule



labre



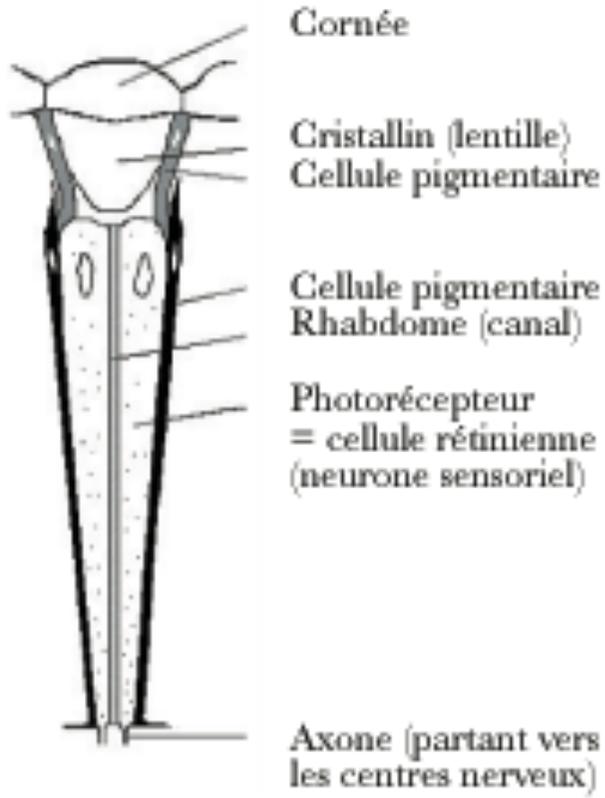
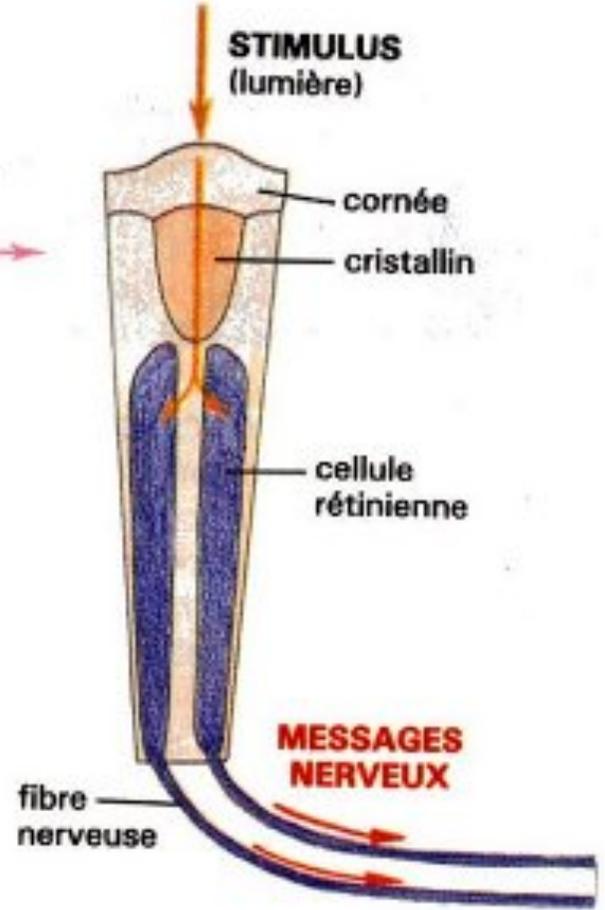
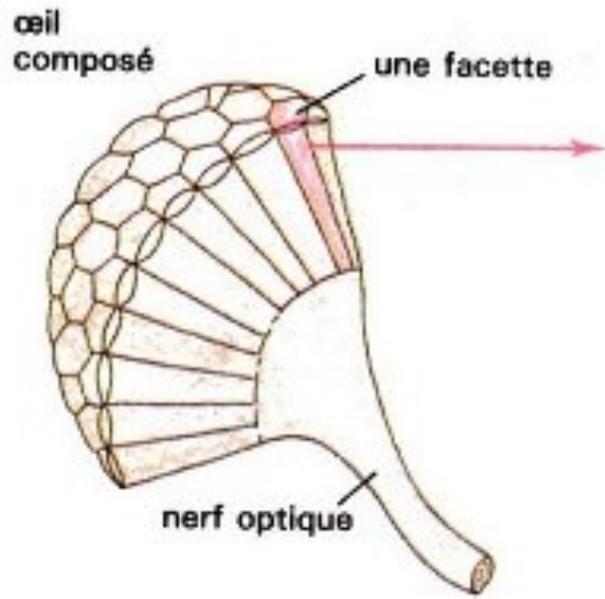
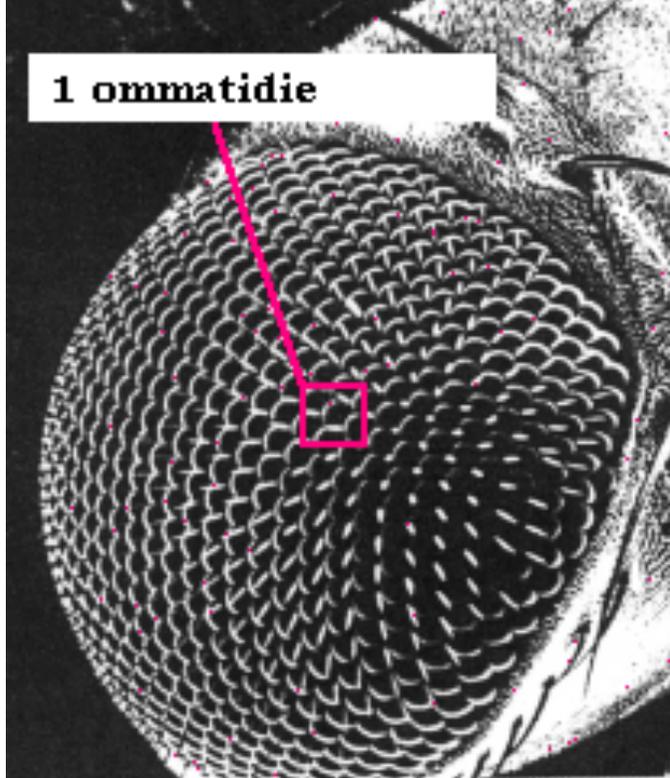


Cornée de l'œil composé
au microscope optique
X 100

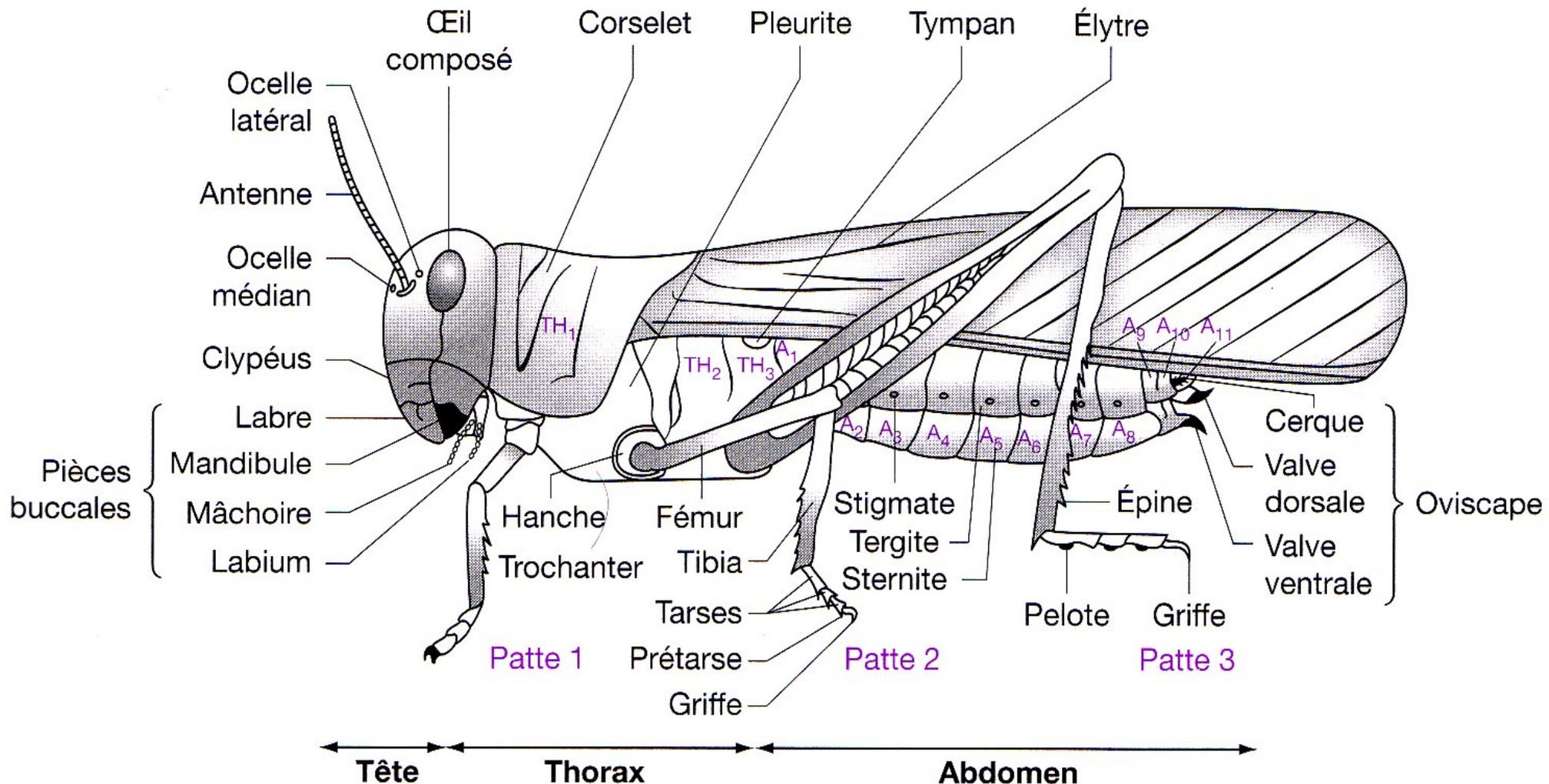


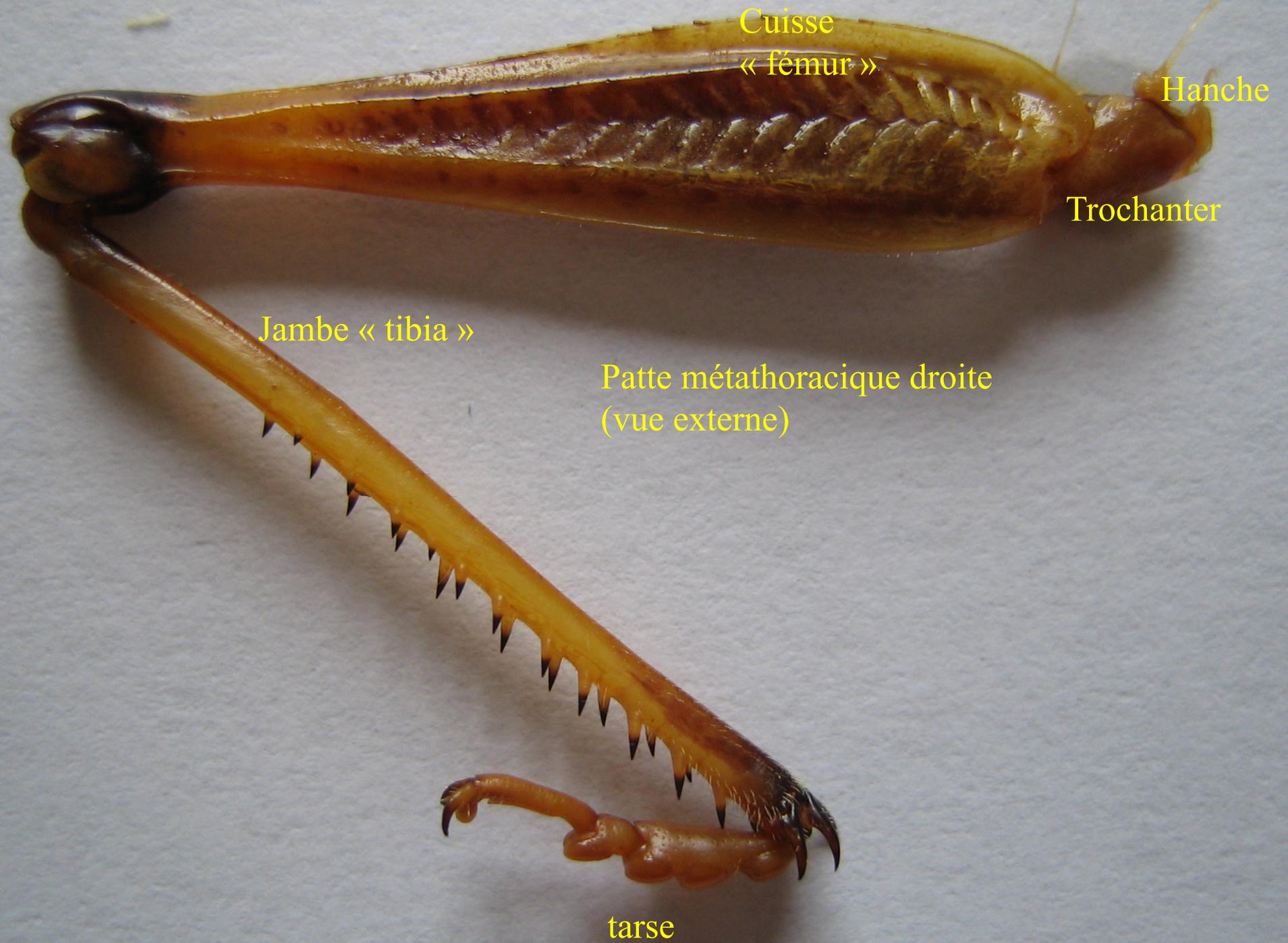
Chaque hexagone correspond à une cornée
d'ommatidie
X 400

1 ommatidie



Le Thorax





Cuisse
« fémur »

Hanche

Trochanter

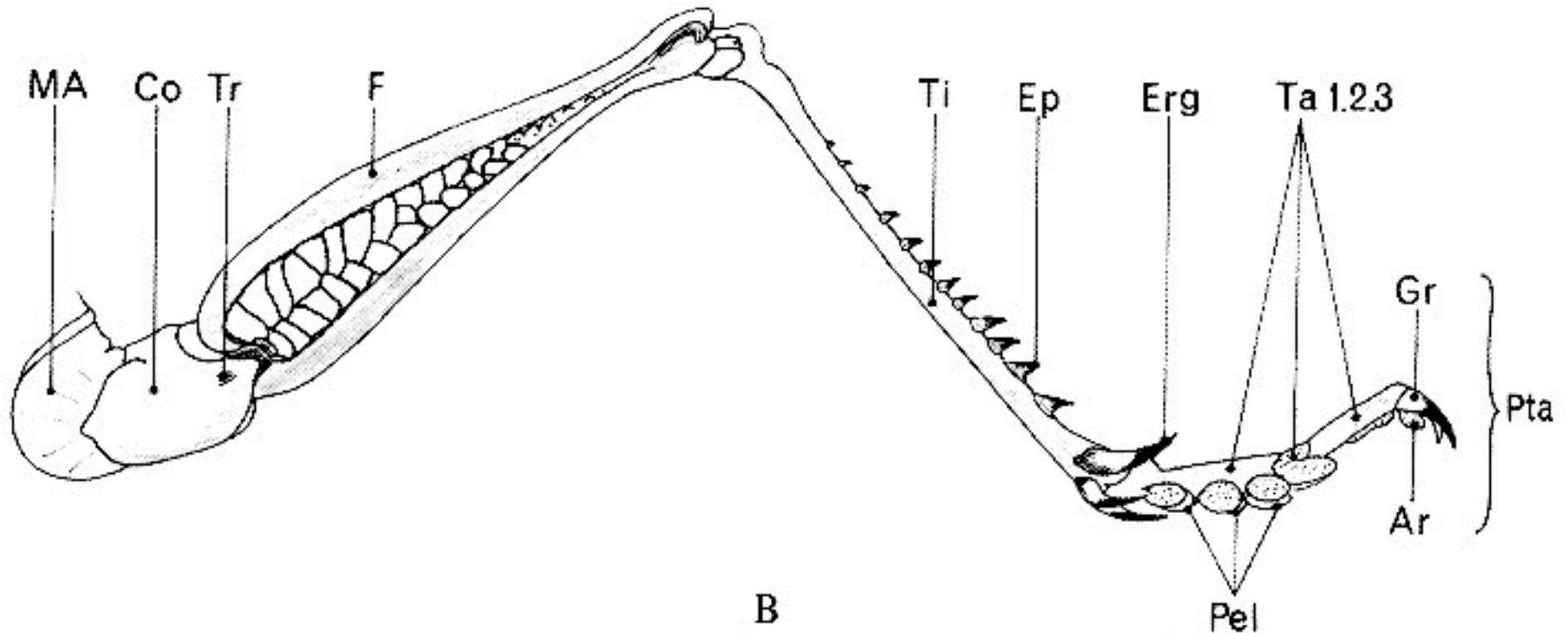
Jambe « tibia »

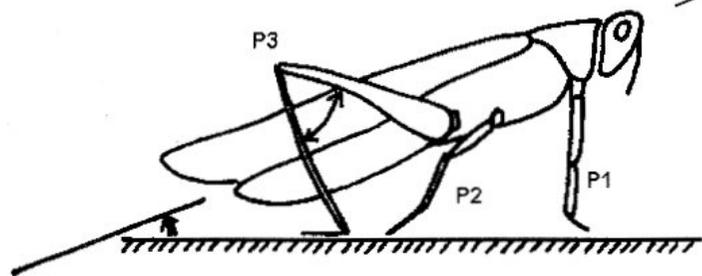
Patte métathoracique droite
(vue externe)

tarse

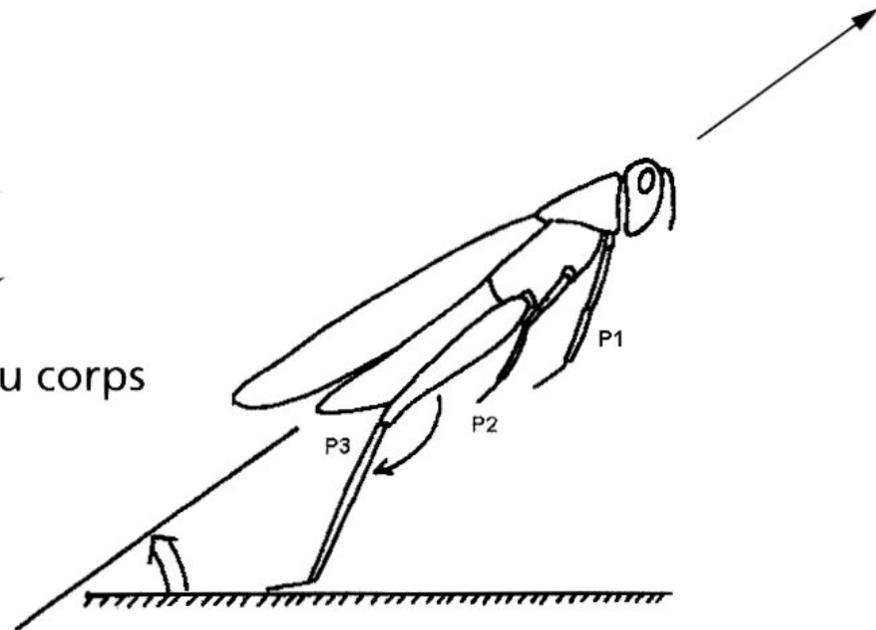
Organisation d'une patte d'Insecte (patte métathoracique de Criquet)

- Coxa = hanche
- Trochanter
- Fémur (cuisse)
- Tibia (jambe)
- Tarse portant des pelotes antidérapantes et deux griffes.





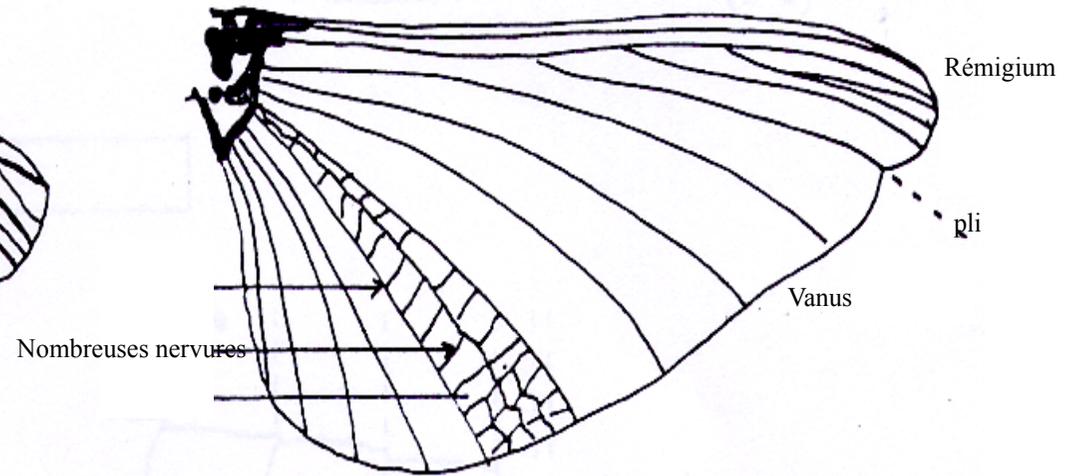
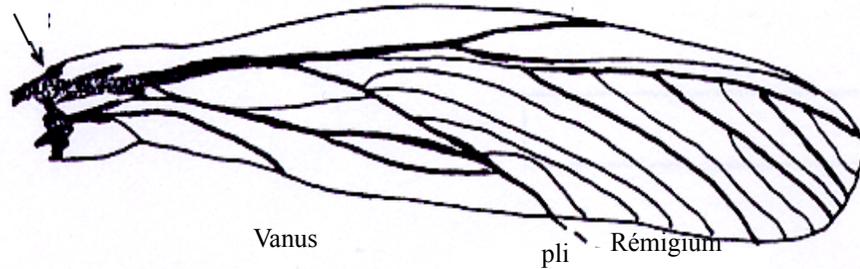
axe du corps



Ailes : prolongement de la cuticule



Sclérites axillaires
(insertion sur le thorax)



Ailes mésothoraciques
= élytres (protection)

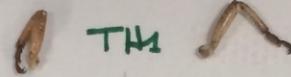
Ailes métathoraciques =
ailes membraneuses (vol)

Patricia

ANTERIEUR

Clémence

G



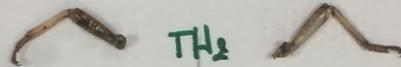
TH1

Patte 1 → marche

D



Aile mésothoracique
= élytre
→ protection



TH2

Patte 2 → marche



Aile métathoracique
= aile membraneuse
→ vol



TH3



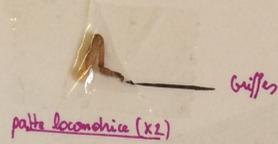
Patte 3
= patte métathoracique
en Z
→ saut

POSTERIEUR

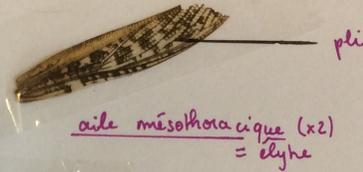
- adaptation au milieu aérien

ANTERIEUR

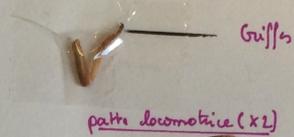
fonction de marche



coriace, rigide
↳ rôle de protection



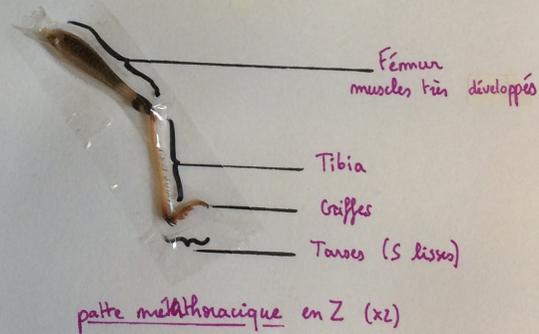
fonction de marche



Aile membraneuse
↳ grande surface
↳ portance
⇒ adaptation au vol



Adaptation au saut

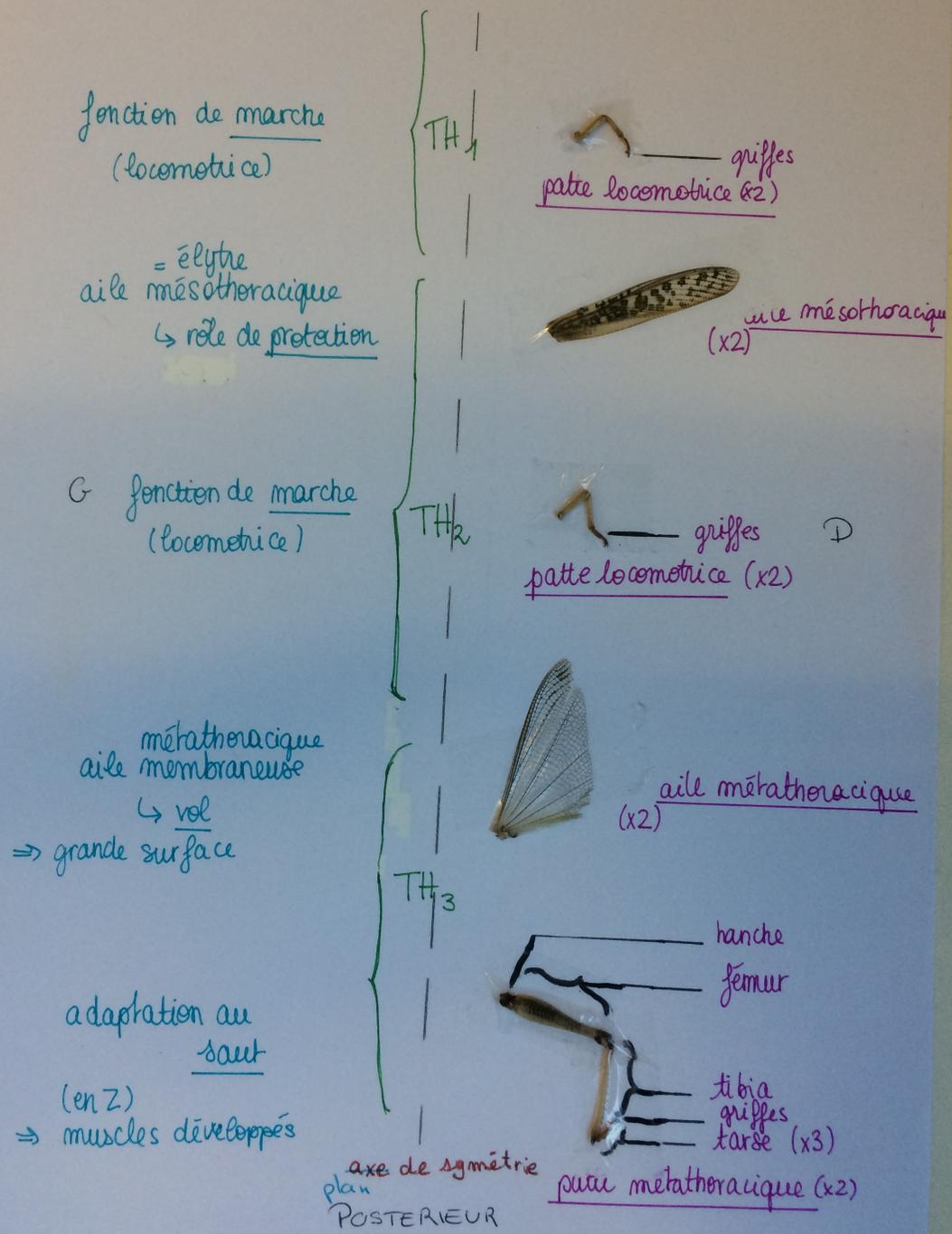


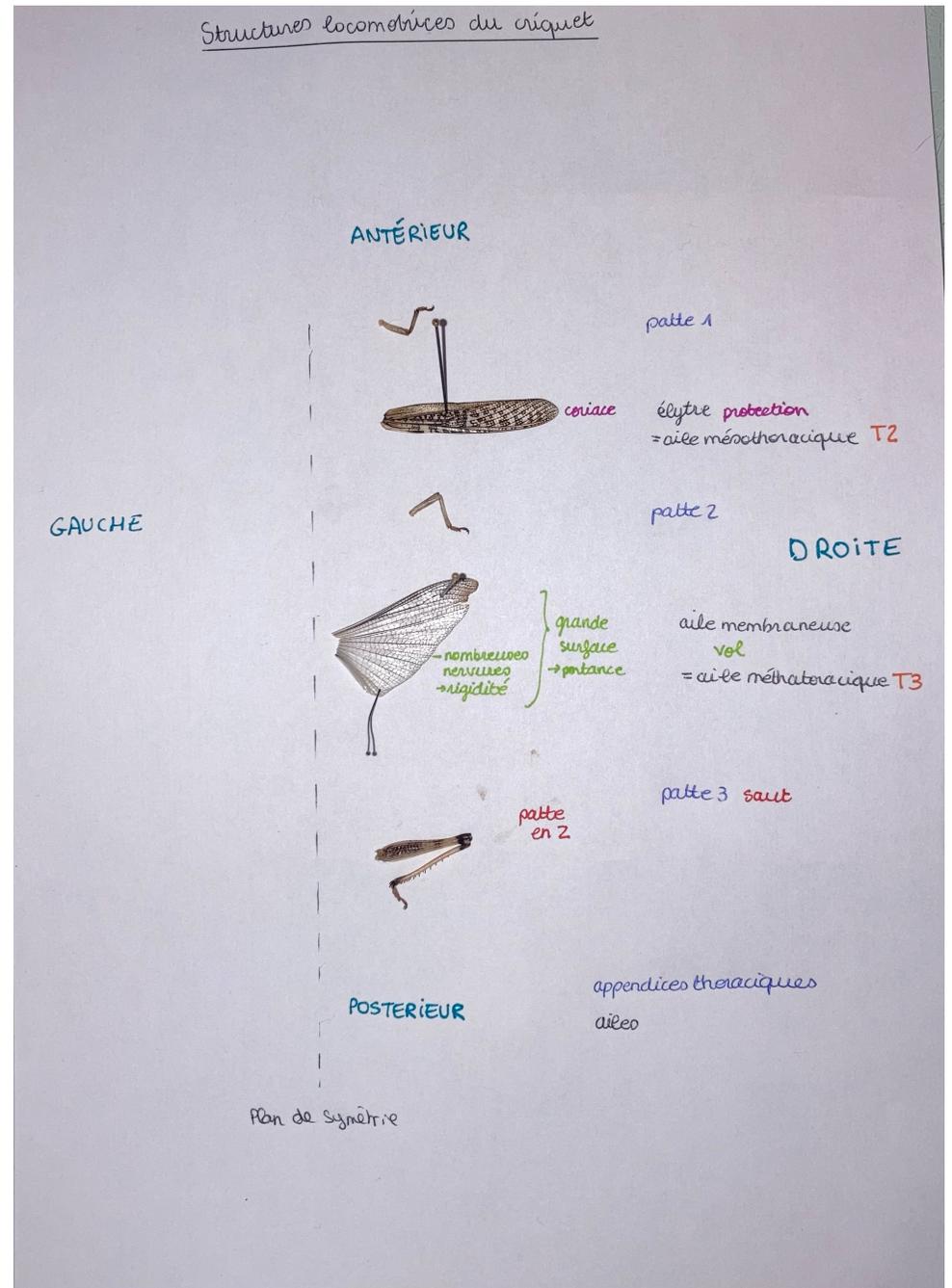
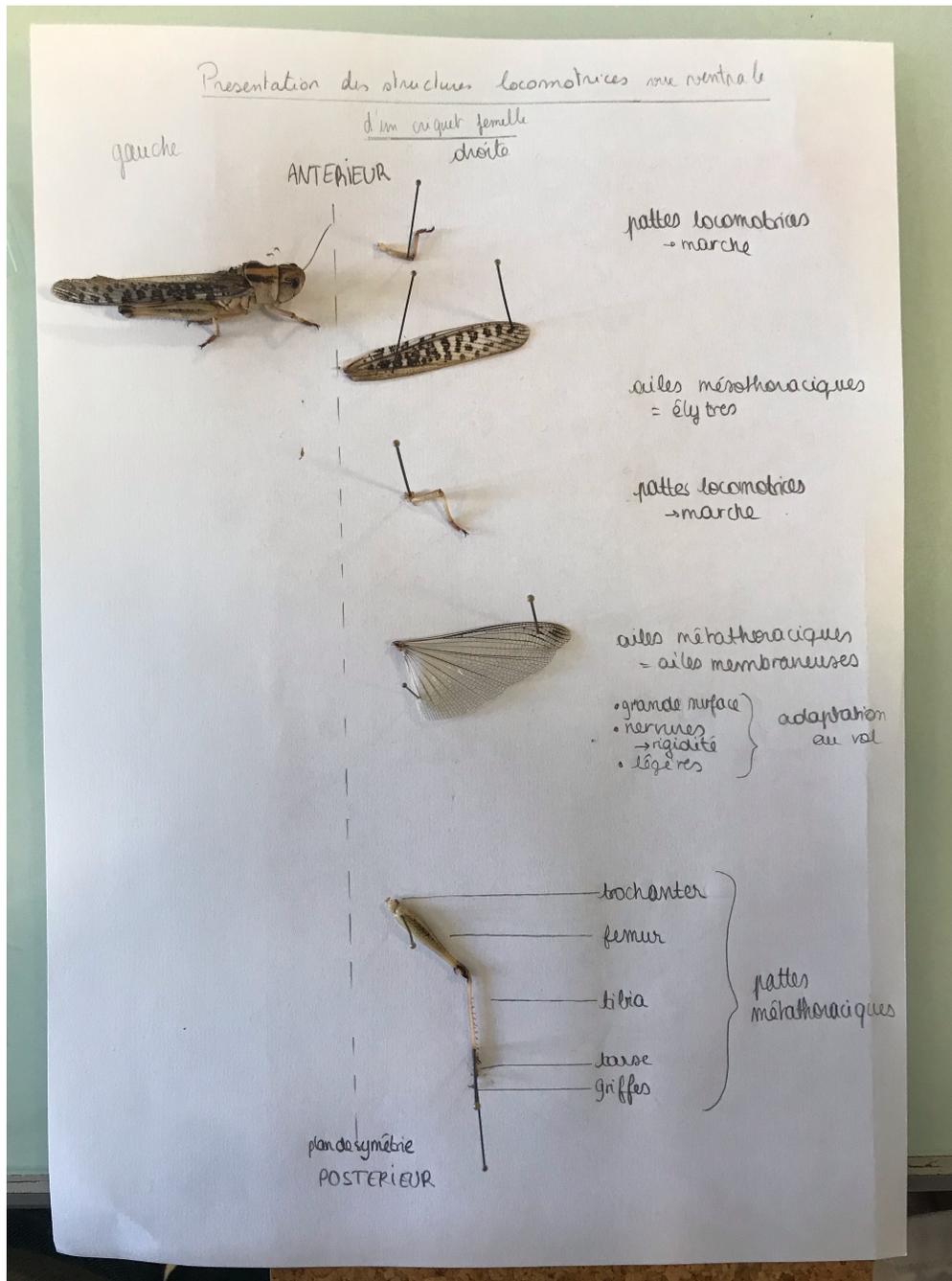
plan de symétrie
POSTERIEUR

Organisation des fonctions locomotrices du ciquet : face dorsale

Les structures locomotrices chez le criquet

ANTERIEUR





Il manque les limites des métamères thoraciques

L'abdomen : respiration et reproduction



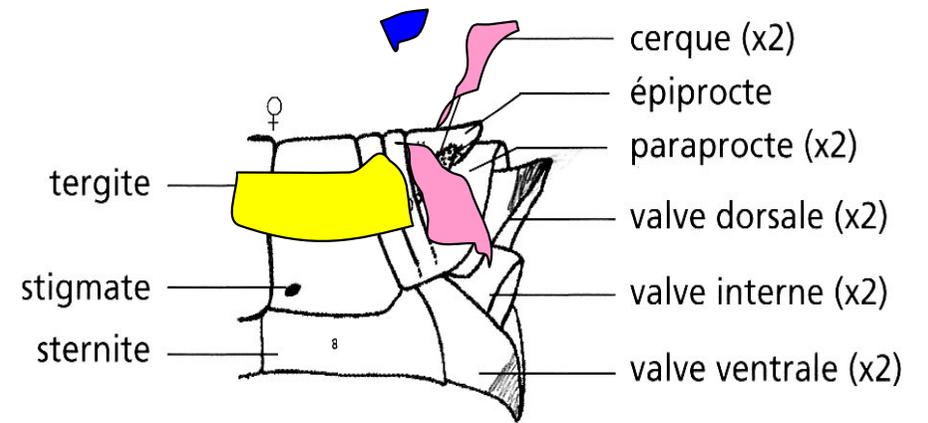
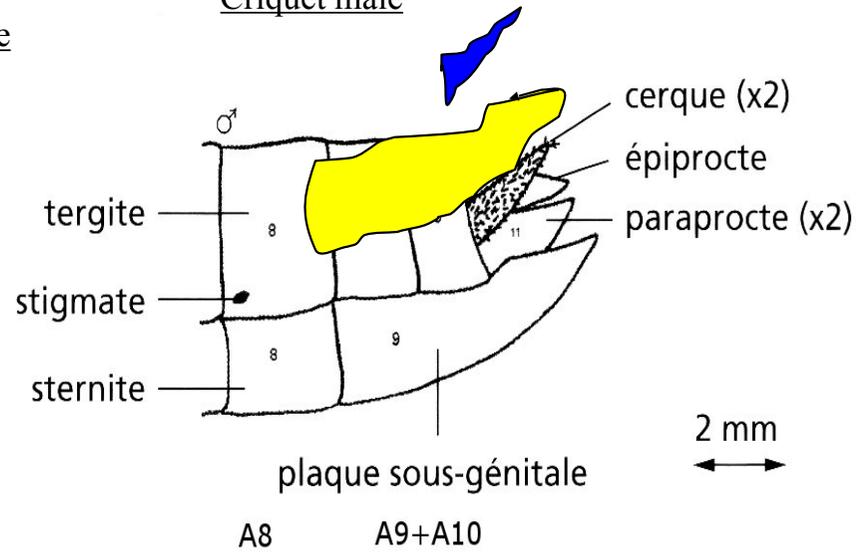


Criquet mâle

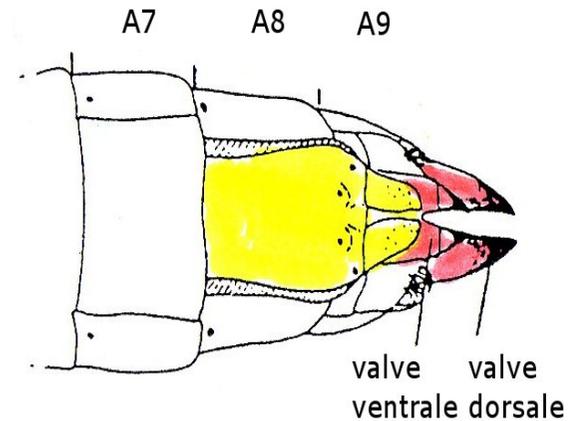
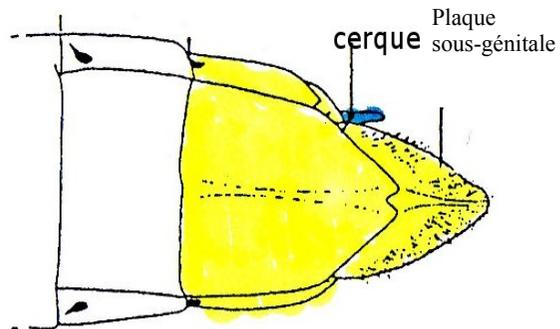


Criquet femelle

Vue latérale gauche



Vue ventrale



Dissection du Criquet









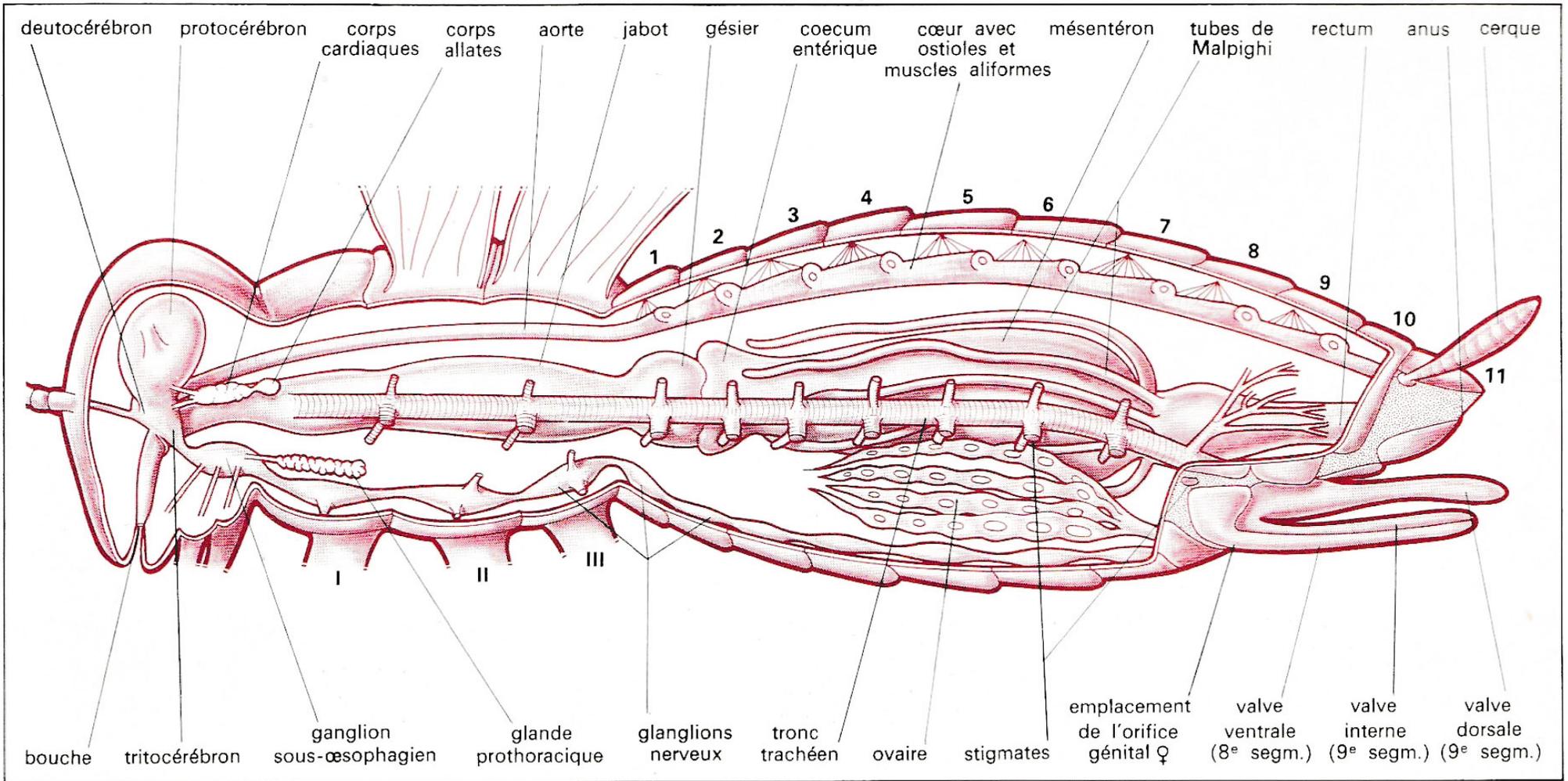
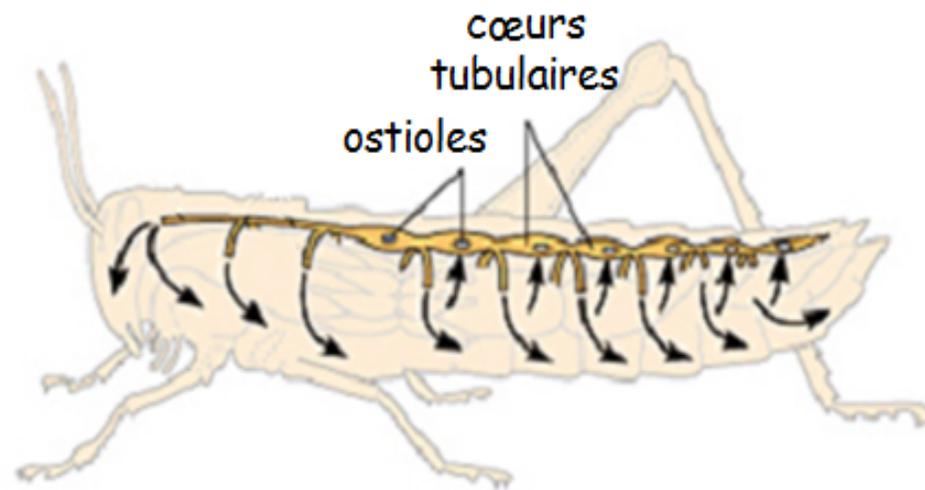
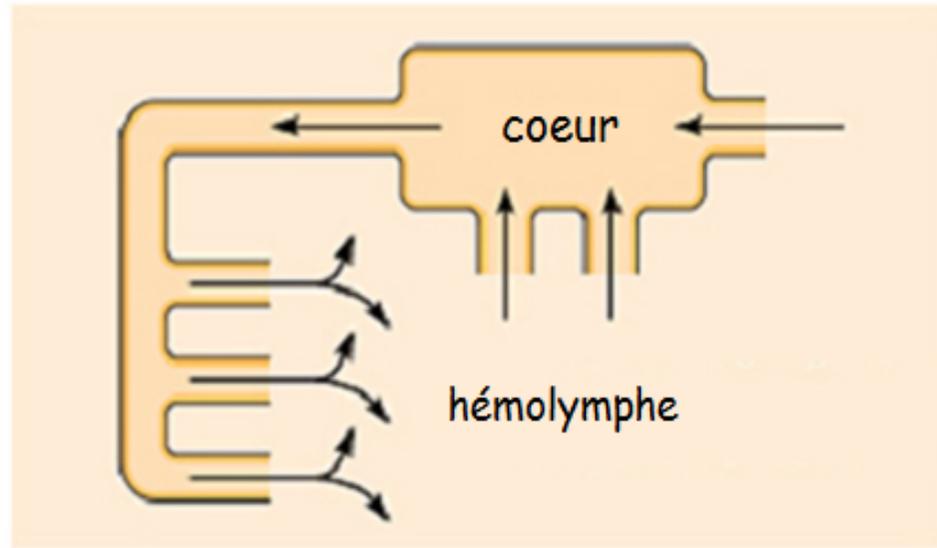
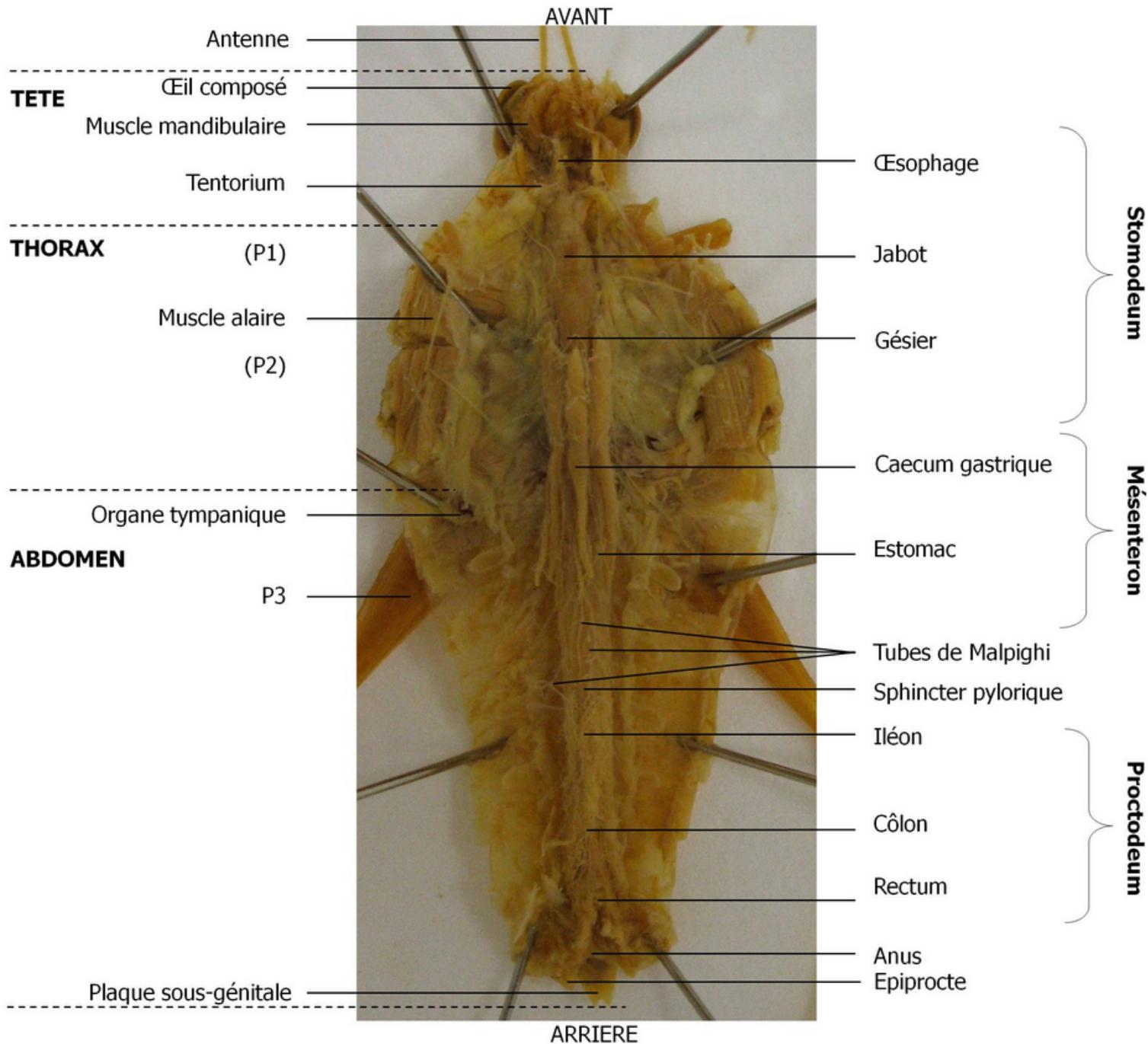


Diagramme de l'organisation d'un Insecte Ptérygote généralisé (♀).

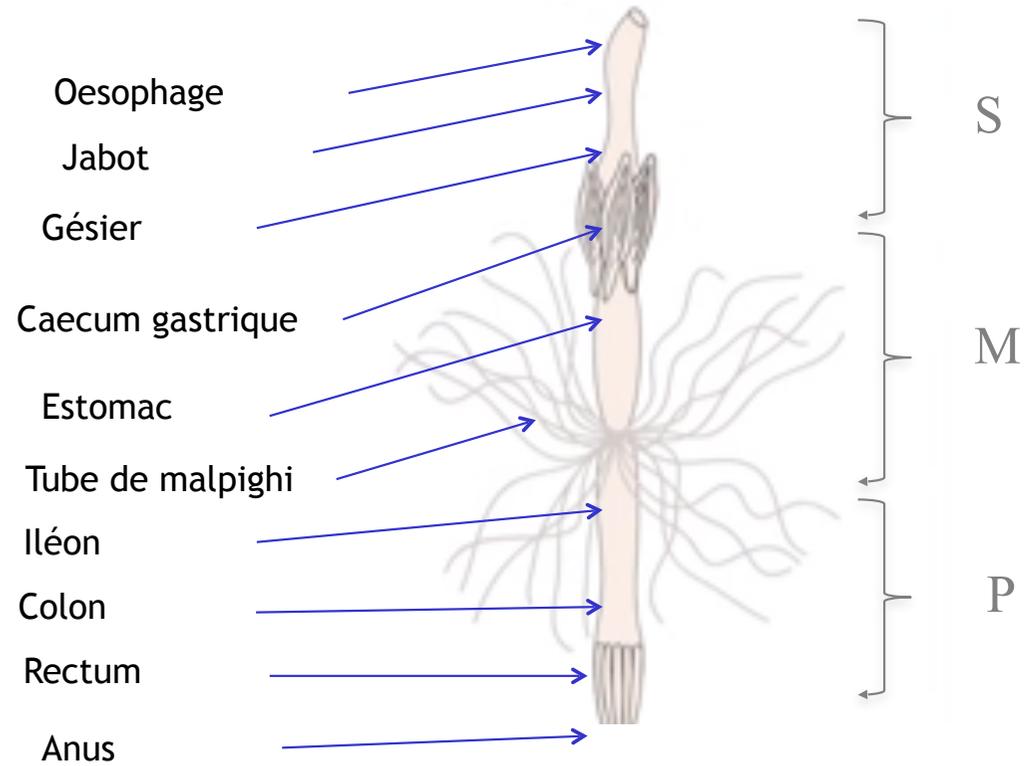
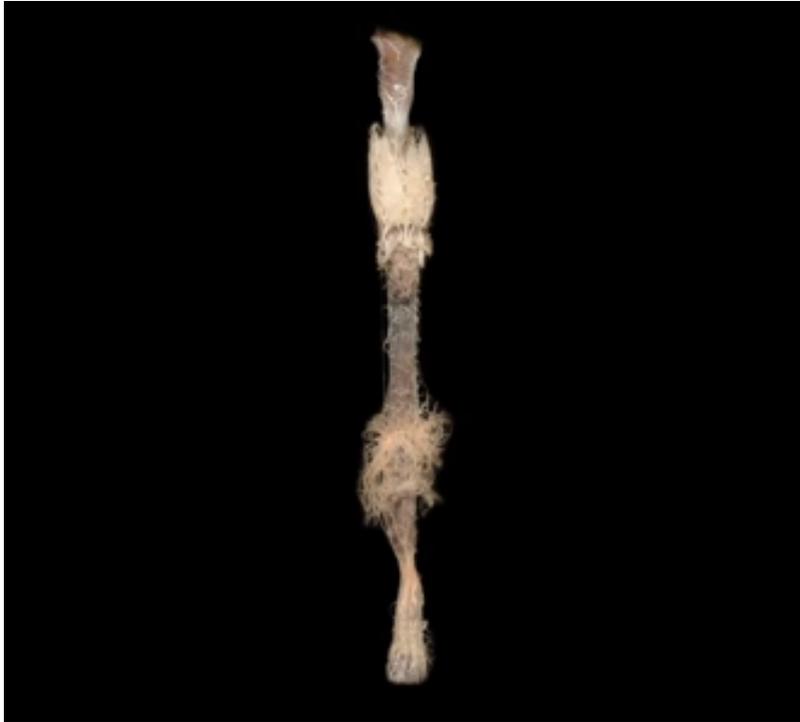
La circulation



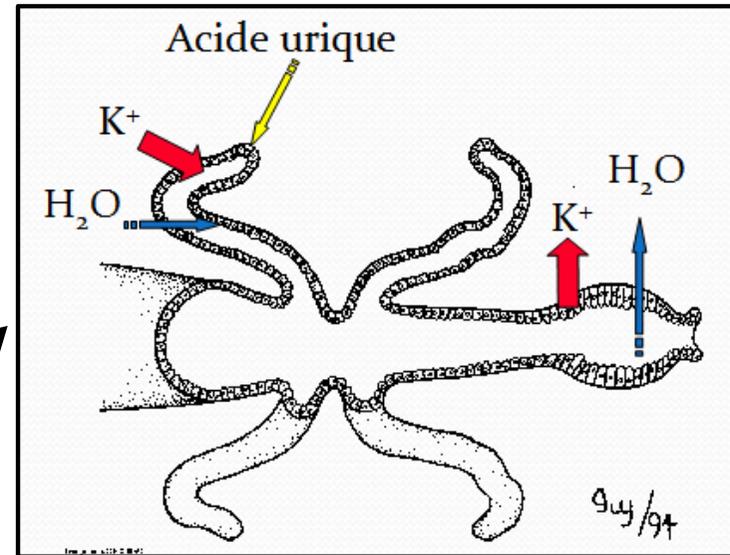
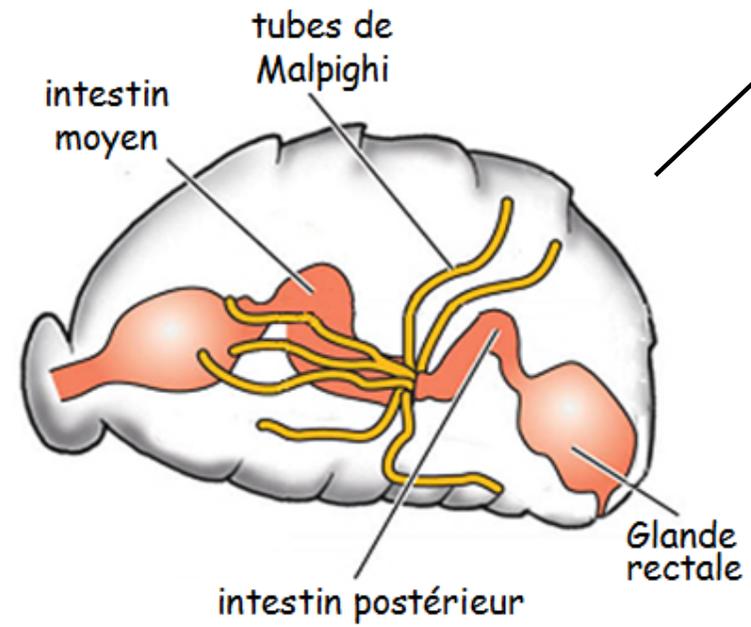
Anatomie du Criquet



Tube digestif



L'excrétion

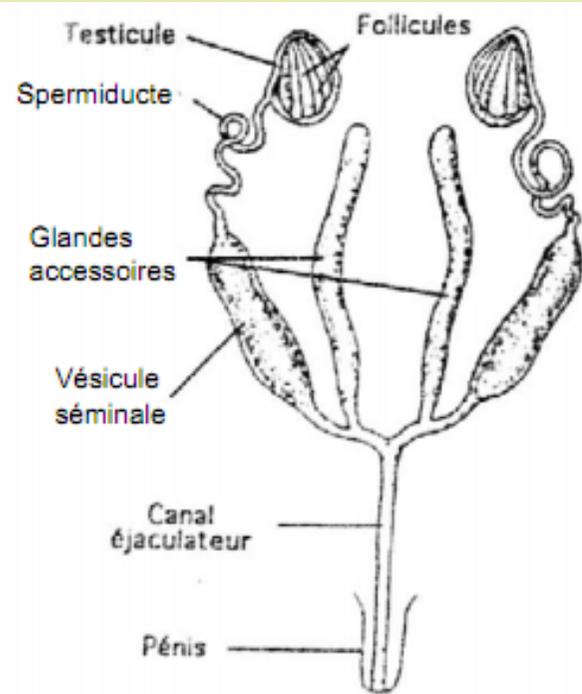
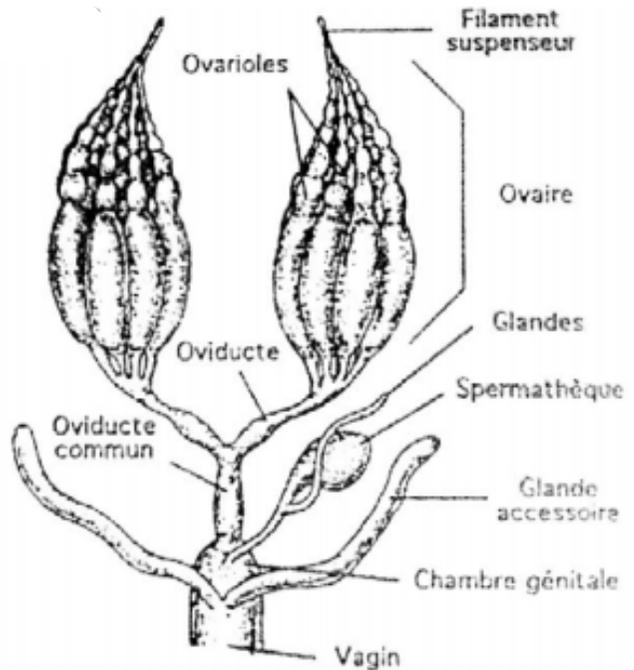
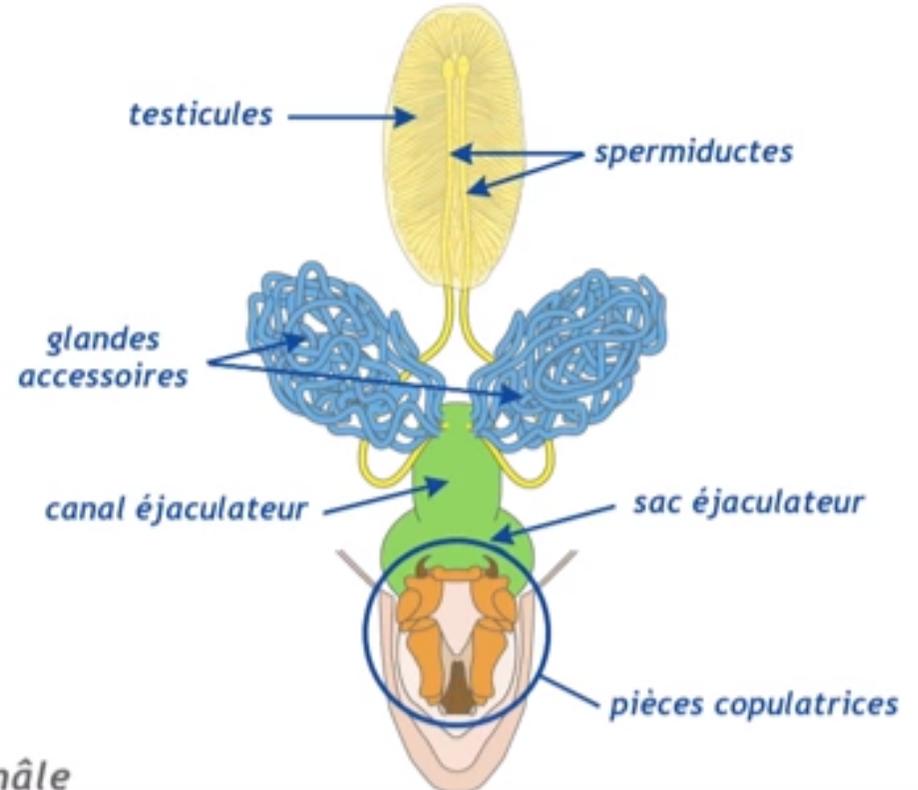
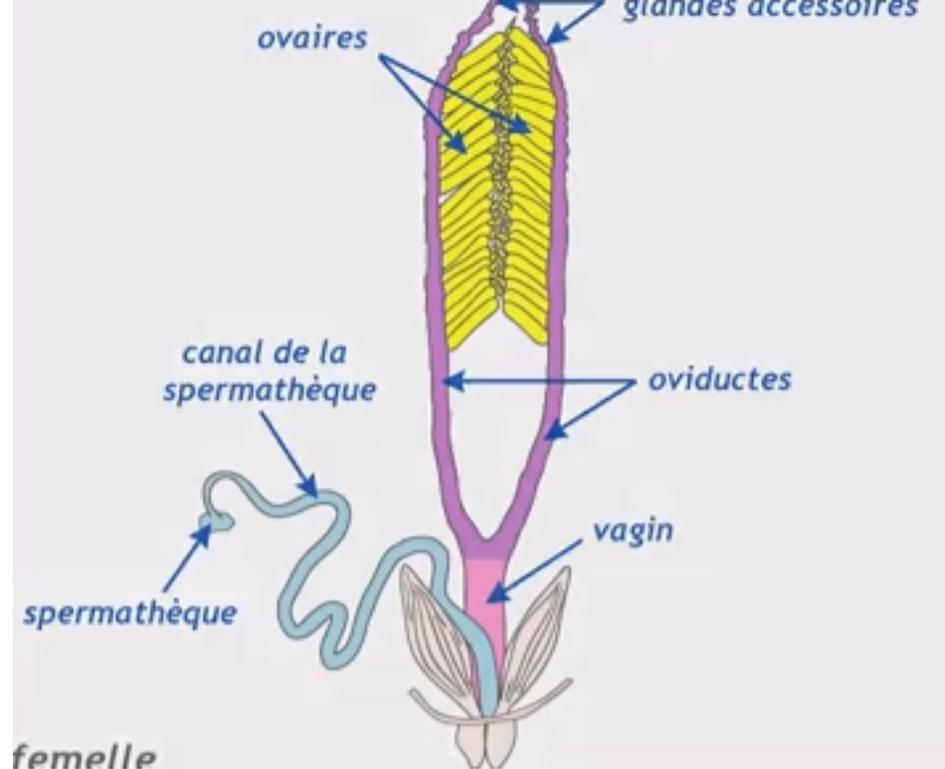


Appareil
génital mâle

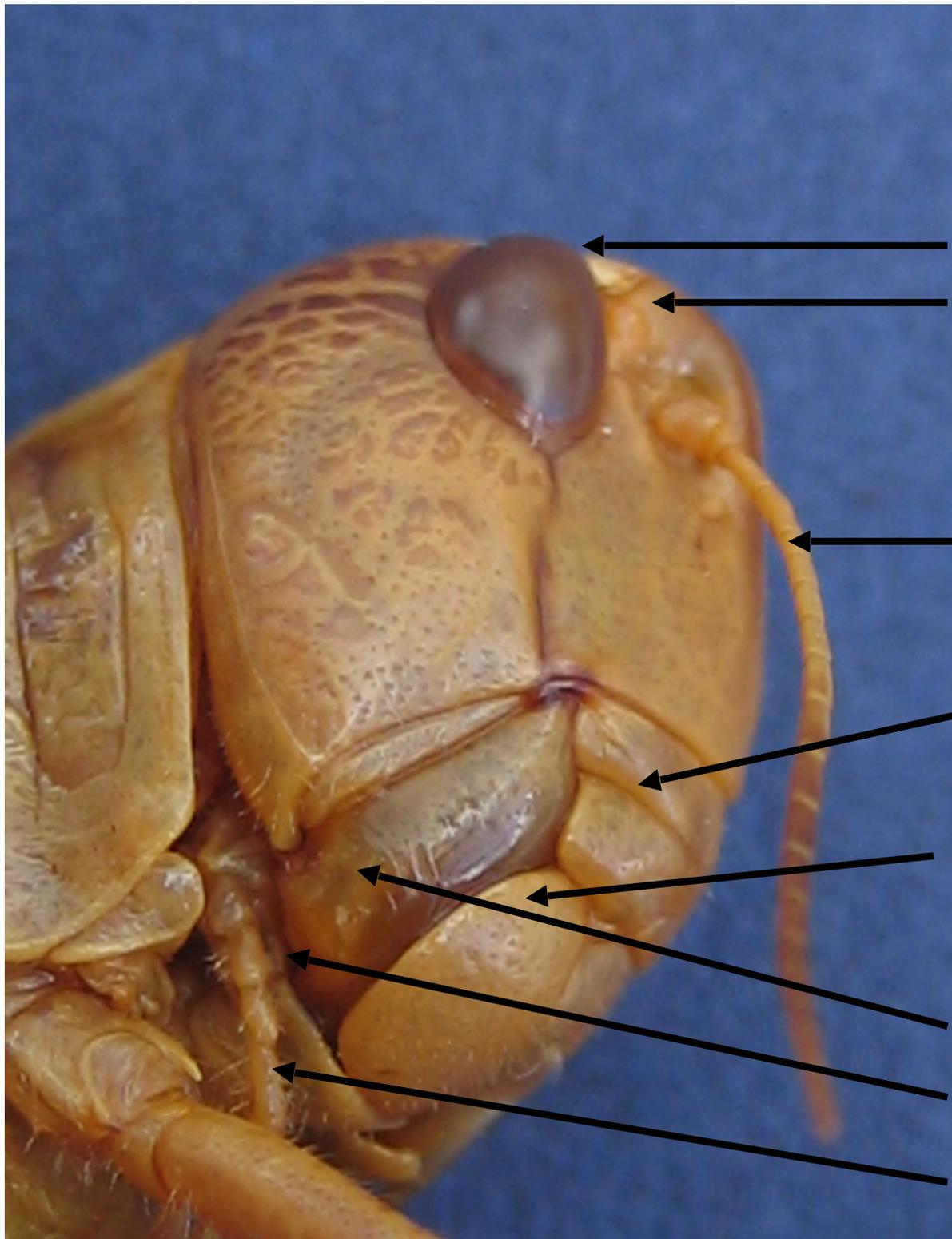


ovaire





Les pièces buccales



oeil composé

ocelle

antenne

clypeus

labre

mandibule

mâchoire

palpe maxillaire



Labre
(lèvre supérieure)
Vue ant



Mandibule
(2 Md)
Vues ant et post D



Hypopharynx
(Langue)



Maxilles
(2 Mx1)
Vues post et ant G



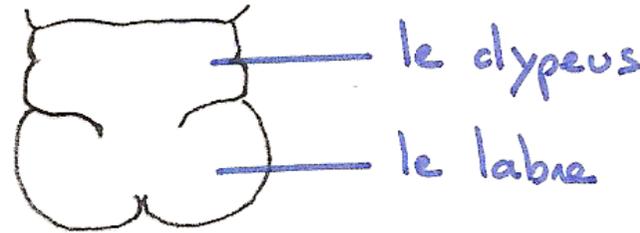
Labium (vue post)
(lèvre inf)
2Mx2 soudées





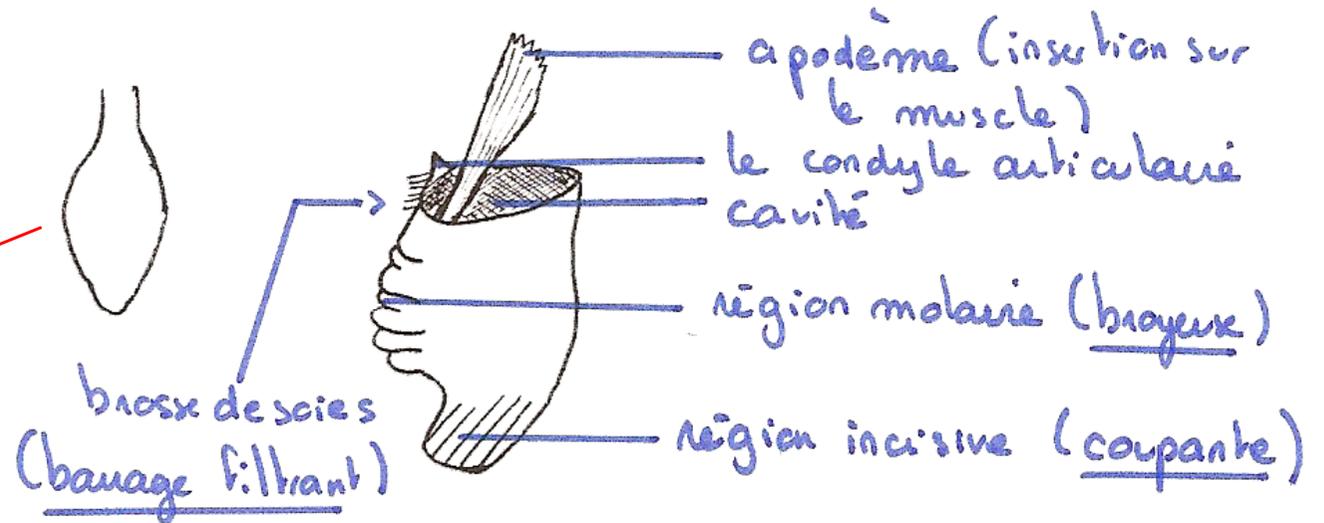
Les pièces buccales du Criquet

LE LABRE
(pas un appendice)



L'HYPOPHARYNX

UNE MANDIBULE



Mandibules (Md)

Mandibule droite
(Vue antérieure)



Mandibule droite
(Vue postérieure)

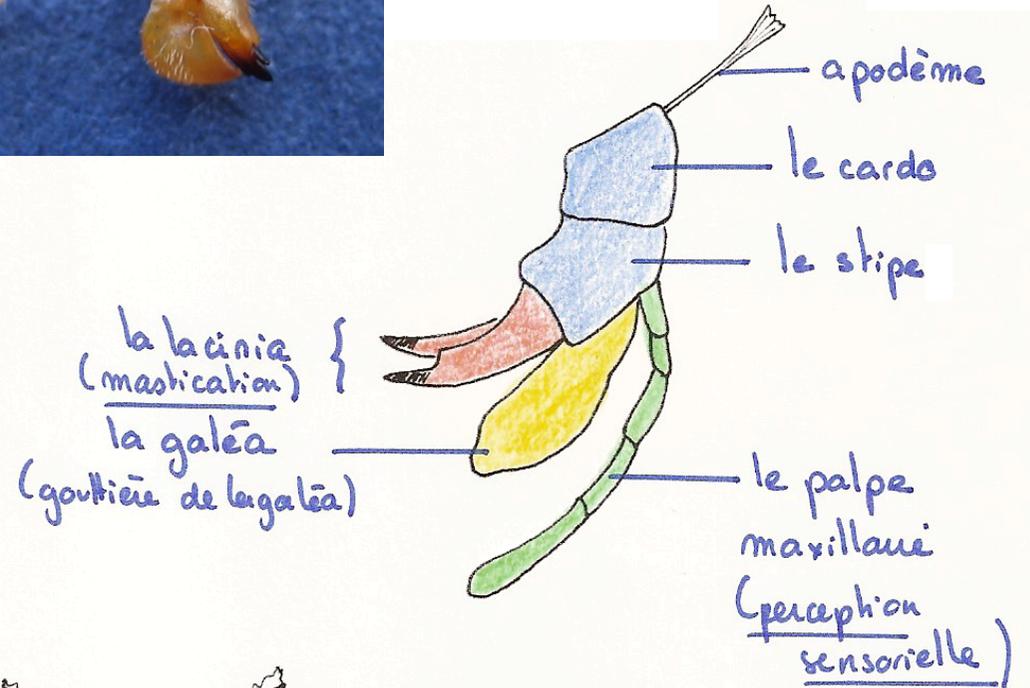


Mx1 G vue post



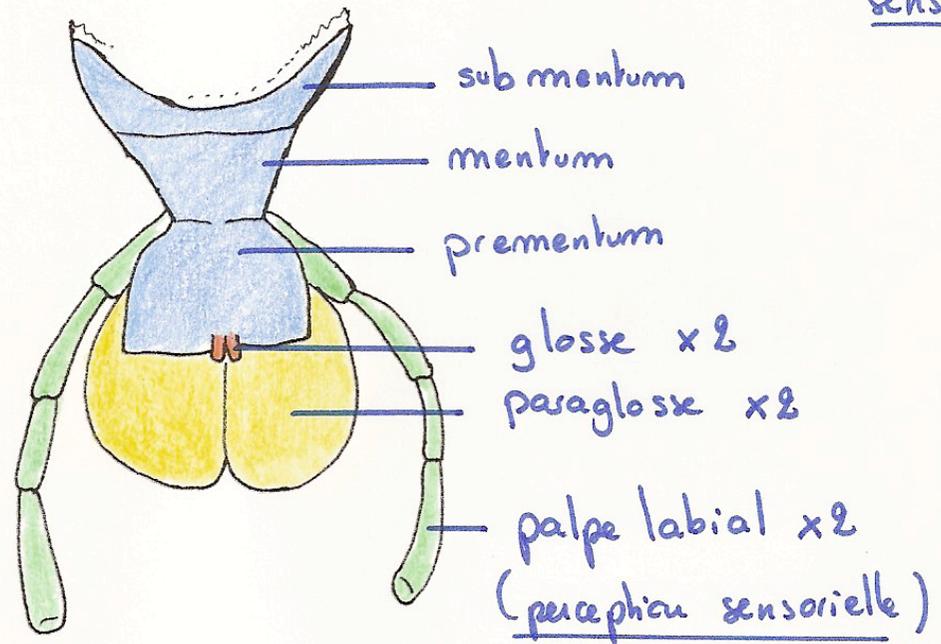
UNE MAXILLE

- protopodite = partie basale*
- endites*
- eudopodite = rampe interne*
- exopodite = rampe externe*



LE LABIUM

Labium vue post



Mâchoires
(Mx1)

Mâchoire gauche (Vue postérieure)

Mâchoire gauche (Vue antérieure)



Labium (lèvre inférieure) = 2 Mx2 soudées

vue postérieure

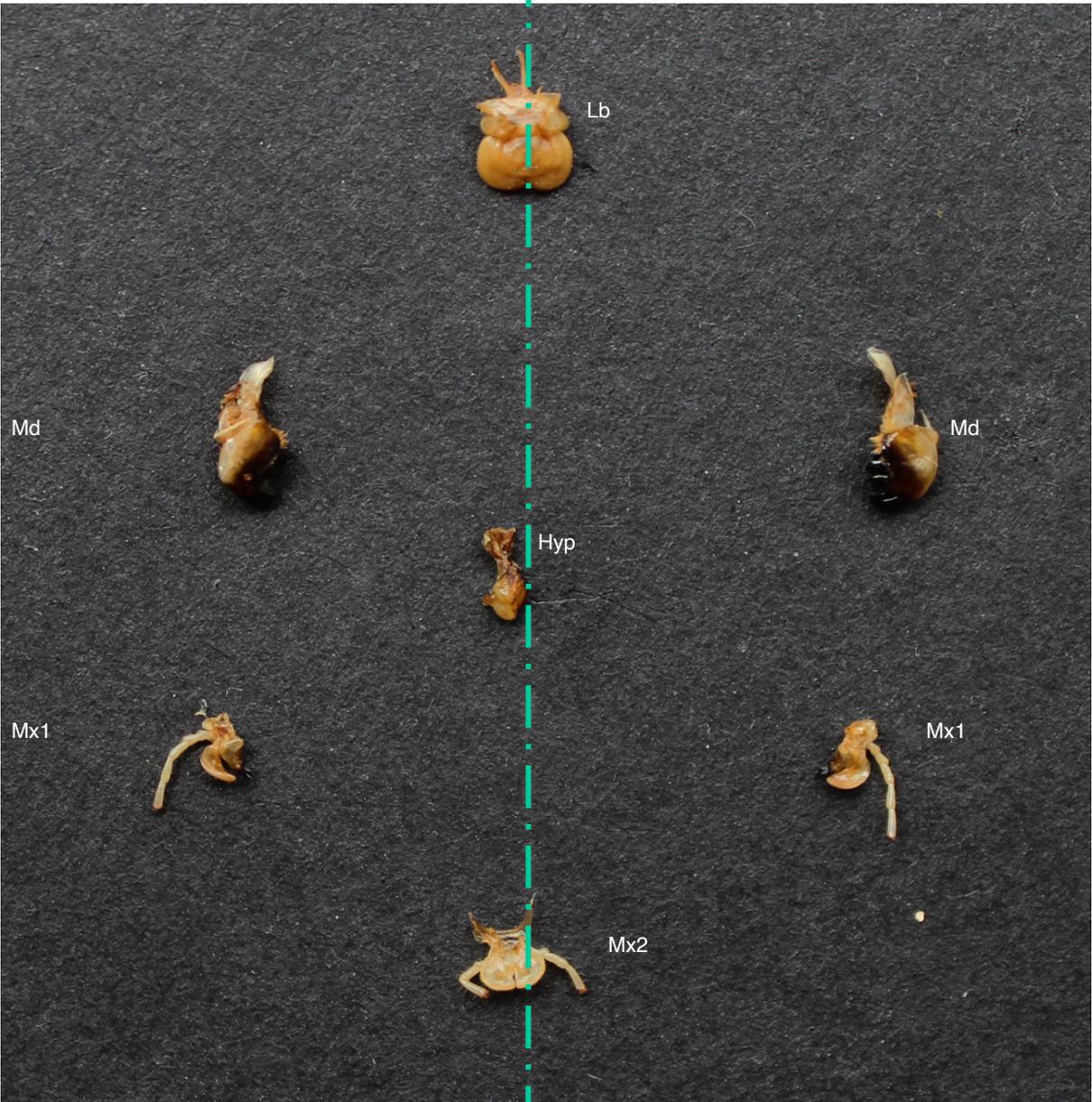


vue antérieure





A



P

Plan de symétrie bilatérale

In Segarra et al., Ellipses

Observation des trachées après extraction : MO X100

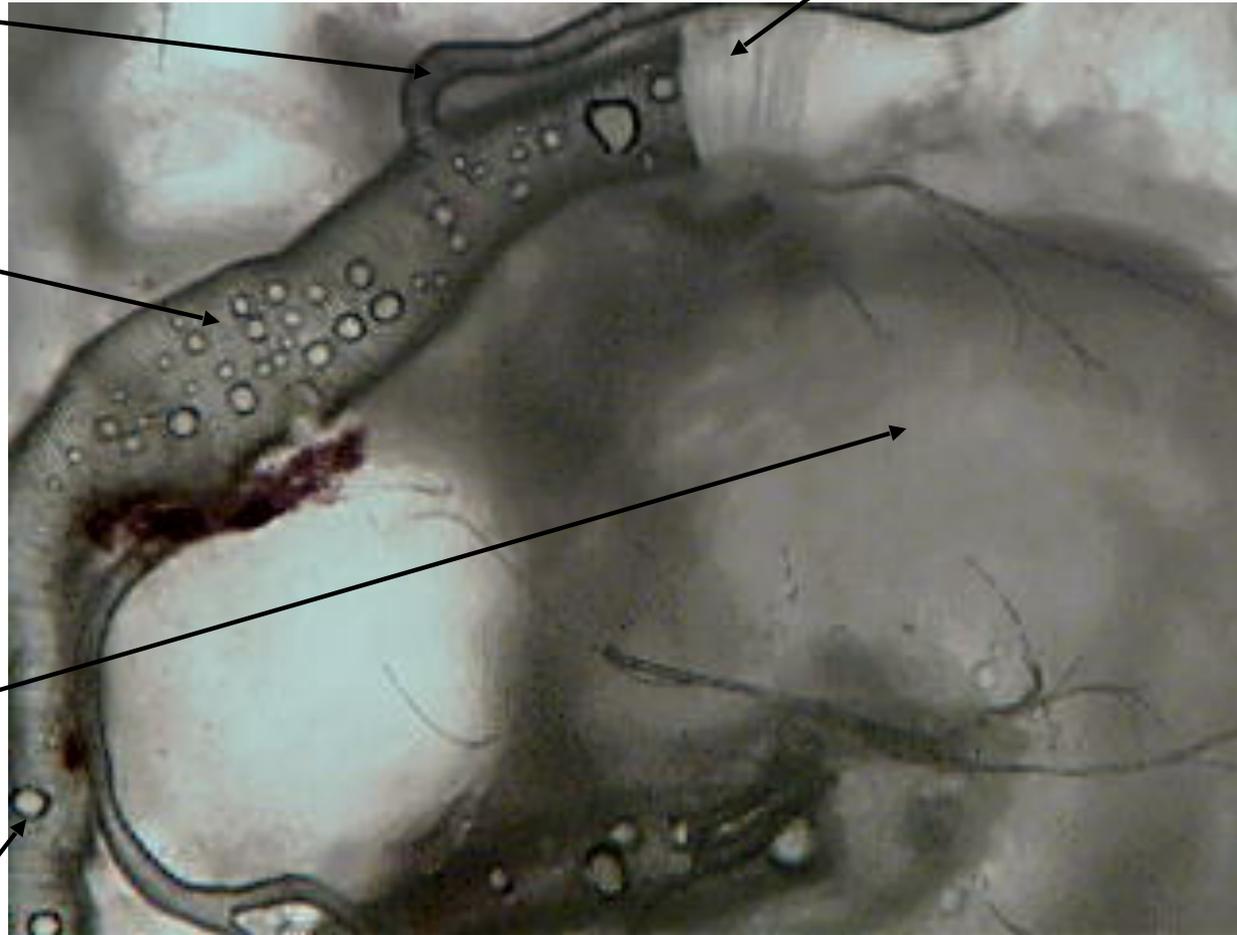
Ténidies
(renforcement d'épicuticule)

Trachéole

Trachée

Tissu adipeux

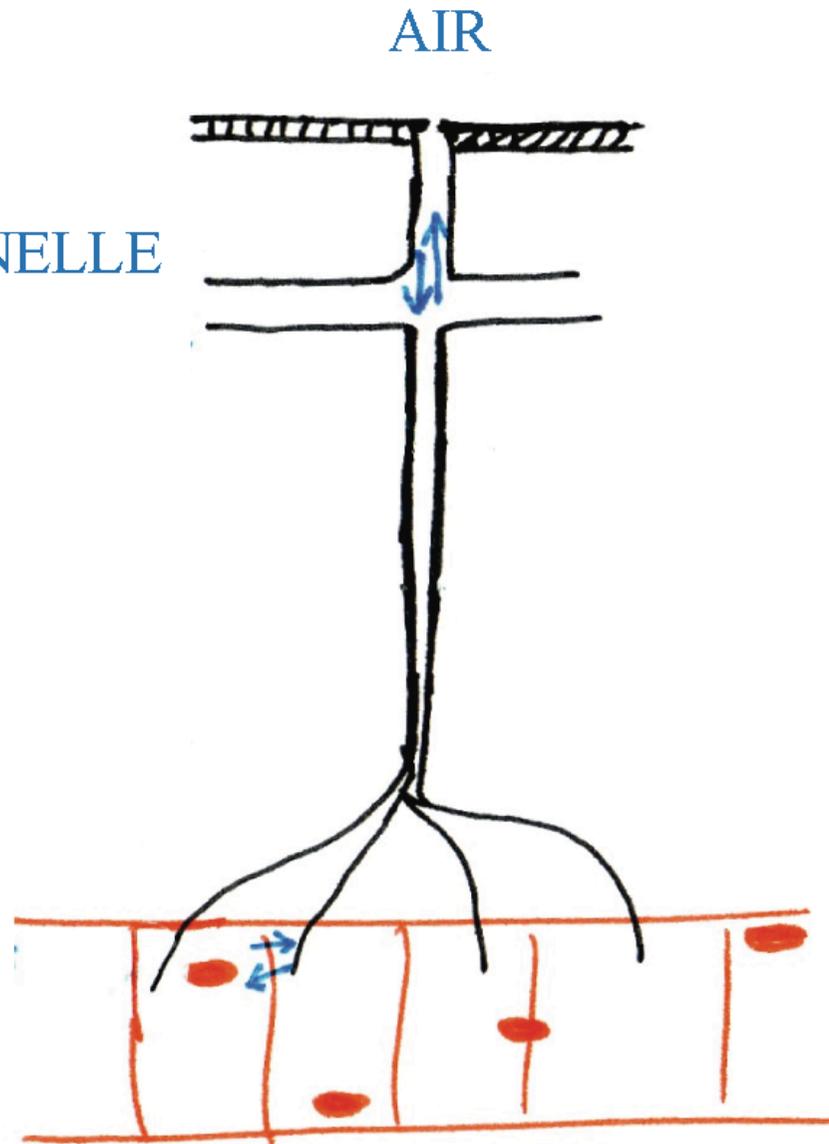
Gouttelette lipidique





VENTILATION
BIDIRECTIONNELLE

DIFFUSION
DES GAZ



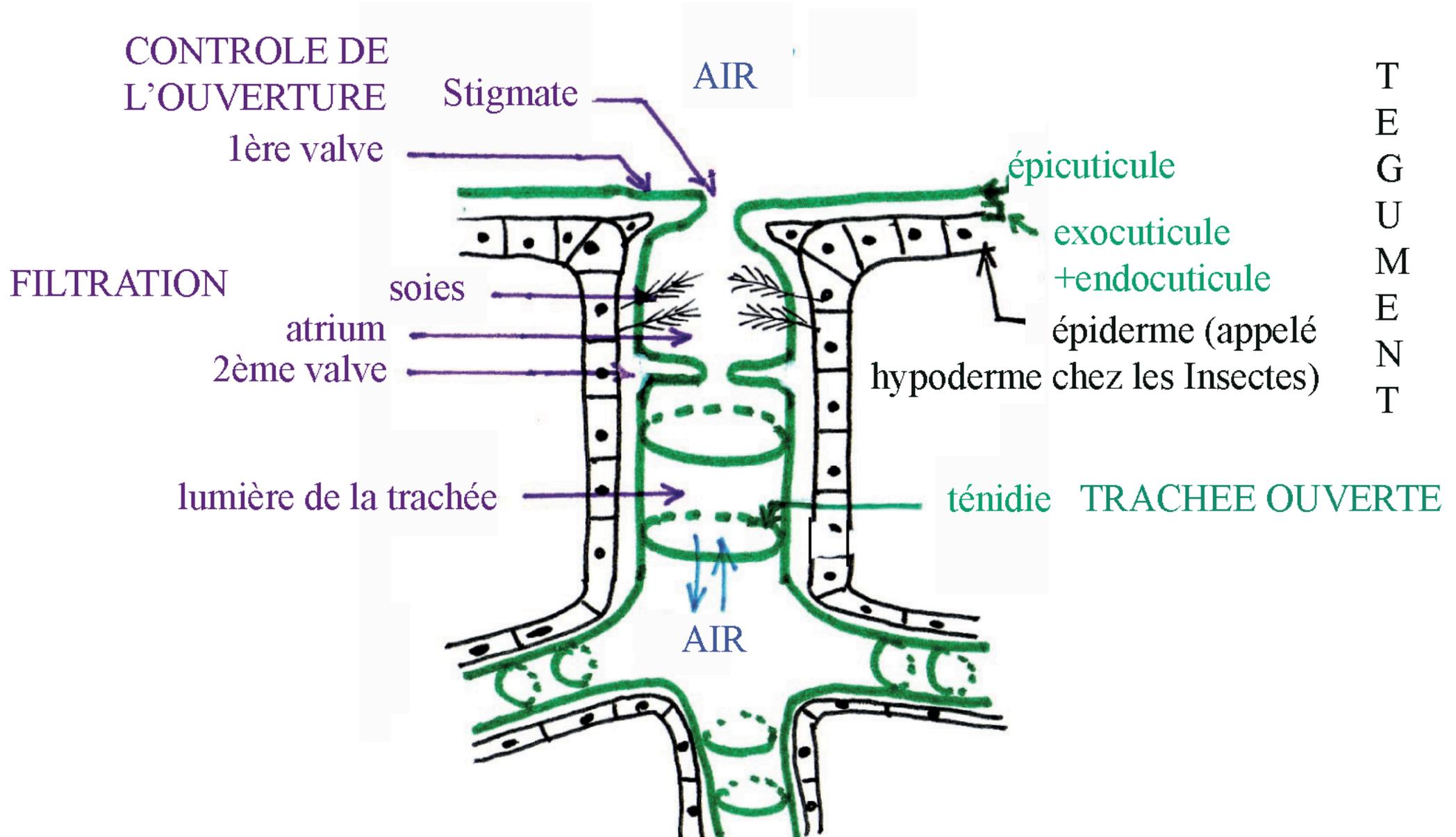
tégument

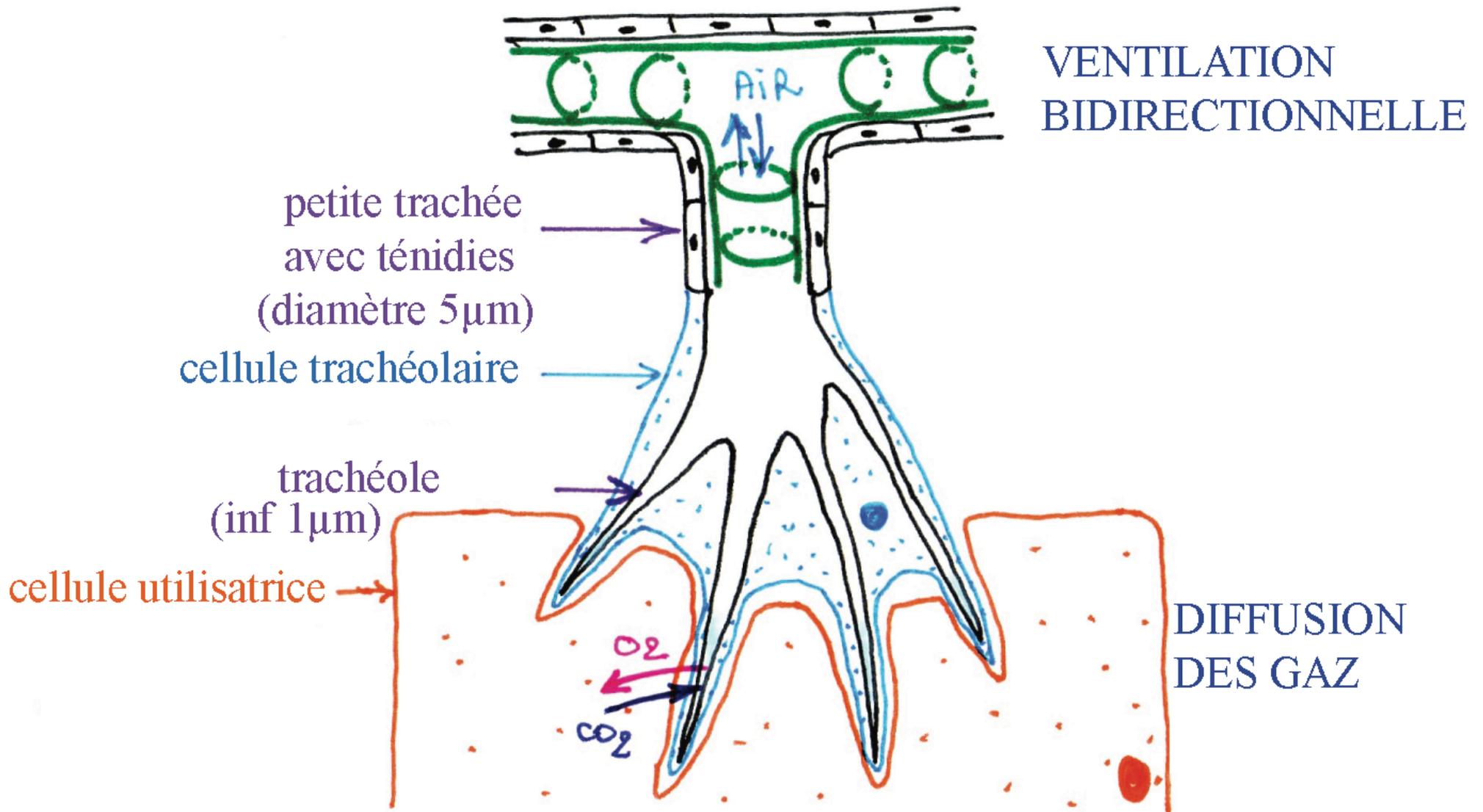
trachée

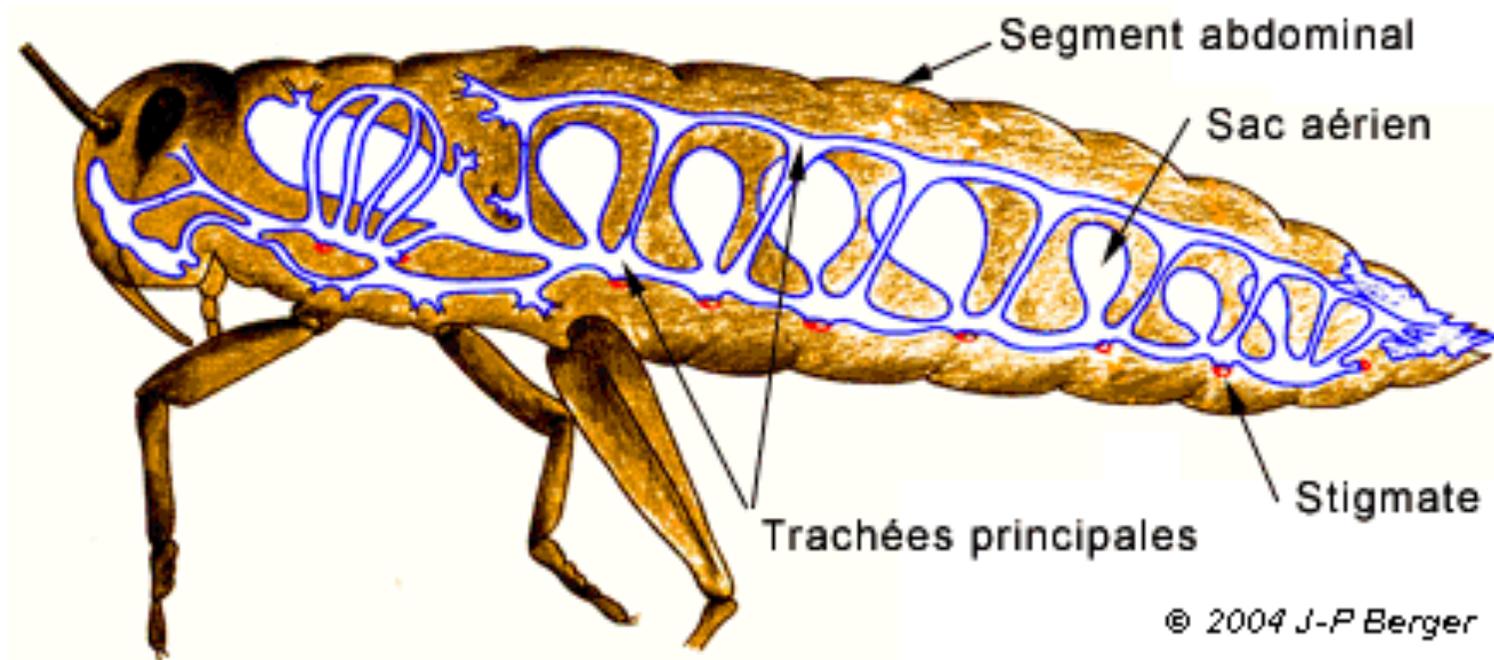
petite trachée

trachéoles

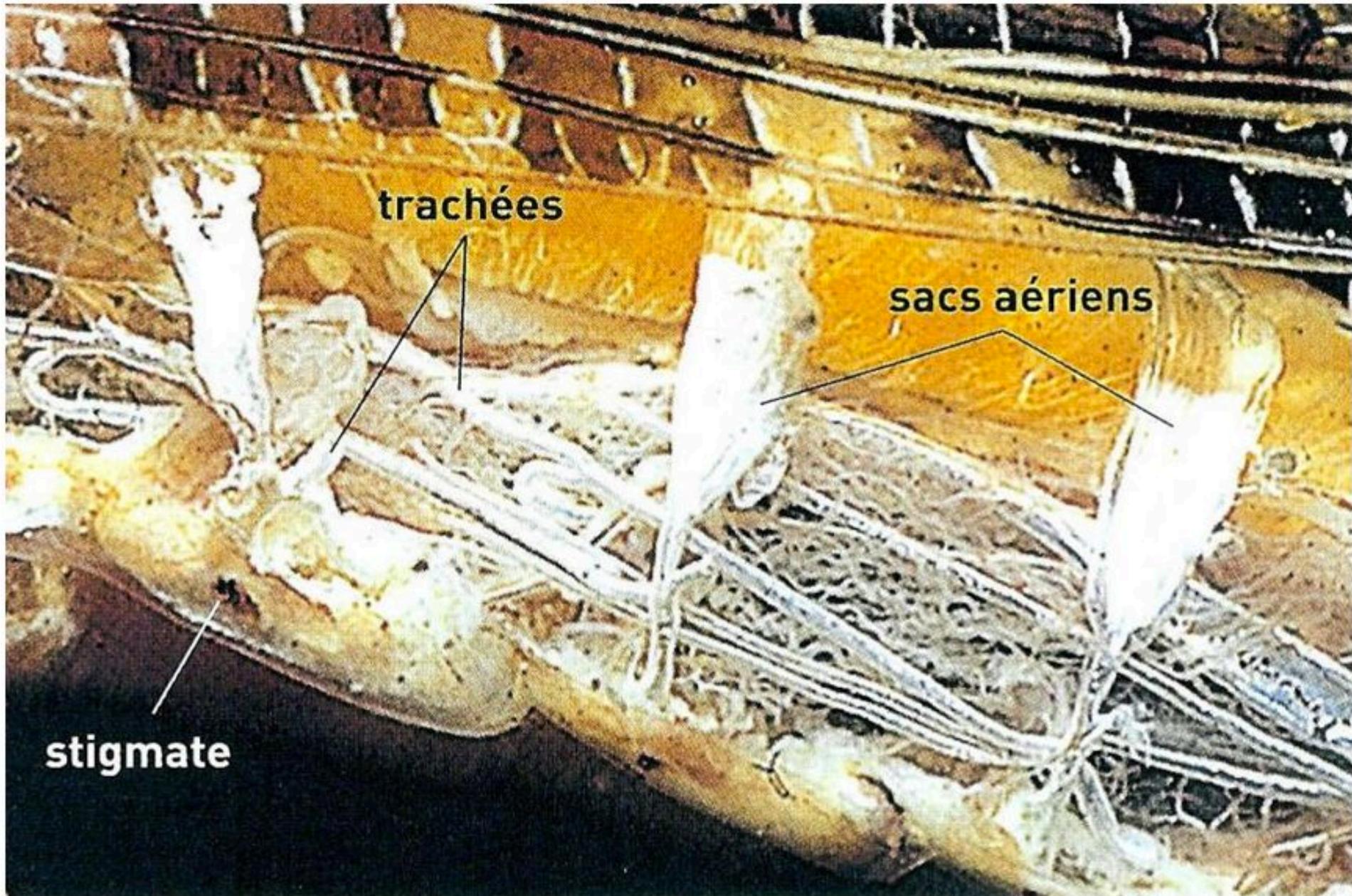
cellule utilisatrice
(ex : cellules musculaire)







Doc 3 p 18 Dissection de l'abdomen de criquet :



Slideplayer

