

KEY TO THE SPECIES IN THE GENUS PINNIXA
COLLECTED IN SOUTHERN CALIFORNIA MONITORING PROGRAMS

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(Applies to either sex; sex specific comments so indicated; juvenile males of some species may resemble adult females more than males in certain features)

SEE ATTACHED DIAGRAMS FOR LOCATION OF ANATOMICAL FEATURES OR REGIONS

- 1A Inner margin of dactyls of WL1,2, and 3 traces a strongly curved line; adult specimens endo-symbionts of bivalves 2 (FIG. 1A)
- B Inner margin of dactyls of WL1,2, and 3 traces a straight or slightly curved line 3 (FIG. 1B)
- 2A Carapace 2X as wide as long, slightly angular at lateral aspect; orbit wraps around eye, almost enclosing it; MALE: fixed finger of chela slightly deflexed; relatively short, with a single notch near tip; merus of WL3 more than 2X as long as wide littoralis (FIG. 2A & 10)
- B Carapace 1.5X as wide as long, with rounded protuberance at antero-lateral aspect; outer margin of orbit grades smoothly into anterior margin of carapace; MALE: fixed finger of chela slightly deflexed, with numerous small teeth; merus of WL3 more than 2X as long as wide fabia (FIG. 2B & 11)
- 3A Fixed finger of chela angled obliquely downward relative to line defined by bottom of propodus (usually weakly in females and more strongly in males) occidentalis (FIG. 3A & 12)
- B Bottom of propodus of chela sinuous or straight; fixed finger of chela approximately straight or curved upwards at the tip 4 (FIG. 3B)
- 4A Dactyl of WL4 does not ^{a just} reach to distal end of merus of WL3 when both legs are extended; WL3 disproportionately larger than other walking legs 5 (FIG. 4A)
- B Dactyl of WL4 reaches ^{definitely reaches} beyond end of merus of WL3 when both are extended 6 (FIG. 4B)
- 5A Propodus of WL3 approximately as long as wide, appearing inflated relative to flanking segments; no tubercles on posterior margin of ischium of WL4; carapace approximately 2.5X as wide as long; chelae stout, with fingers shorter than palm tubicola (FIG. 5A & 13)

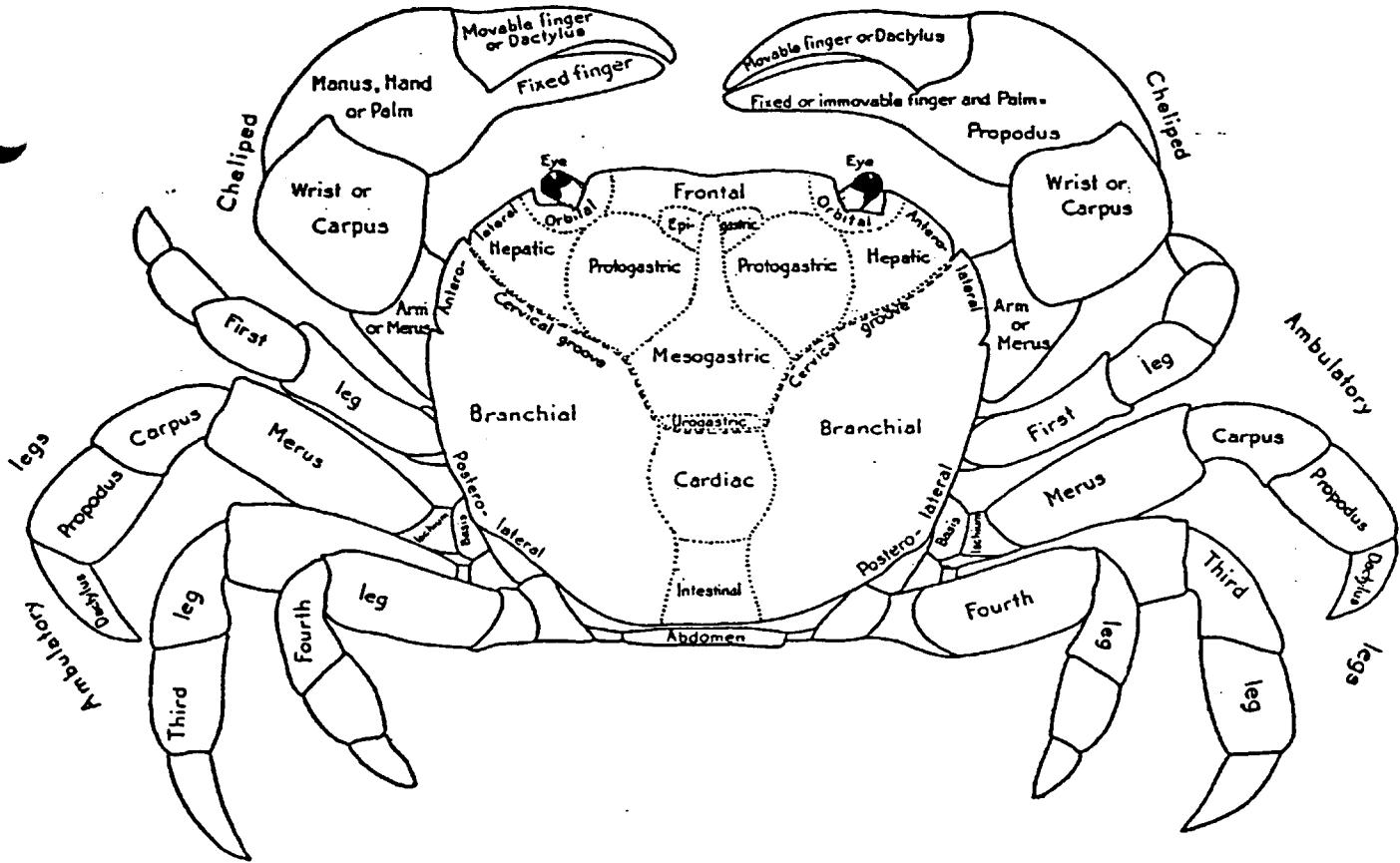
Handwritten notes and arrows pointing to items 4B and 5A.

- B Propodus of WL3 distinctly longer than wide, more in proportion to segments flanking it; two large tubercles on posterior margin of ischium of WL4; carapace almost 3X (2.9) as wide as long; chelae feeble; margin of carapace, chelipeds, WL3, and WL4 with long setal fringe longipes
(FIG. 5B & 14)
- 6A Carapace has distinct antero-lateral ridge; may or may not be granulated (NOTE: in P. tomentosa, ridge is subtle, with very small granulations). 7
(FIG. 6A)
- B No distinct antero-lateral ridge; antero-lateral aspect of carapace smooth and round 10
(FIG. 6B)
- 7A Dactyl of WL3 shorter than propodus tomentosa
(FIG. 7A & 15)
- B Dactyl of WL3 approximately equal to or longer than propodus 8
(FIG. 7B)
- 8A Propodus of WL3 nearly square (i.e., nearly as wide as long); posterior margin of WL3 propodus with dense tuft of setae; 4 tubercles on posterior edge of ischium of WL4 (medial one largest, outer 3 smaller); (based on female specimen; male specimen unavailable). hiatus
(FIG. 8A & 16)
- B Propodus of WL3 definitely longer (1.5 - 2X) than wide 9
(FIG. 8B)
- 9A Carapace pitted; both male and female with granulate line along lower margin of propodus of chelae; MALE: with strong transverse ridge in cardiac region franciscana
(FIG. 9A & 17)
- B Carapace smooth; female only with weakly developed granulate line along lower margin of propodus of chelae; cardiac region may be slightly inflated, but no transverse ridge in either sex schmitti
(FIG. 9B & 18)
- 10A Dactyl of chela with single large tooth; carapace calcified and strongly convex barnharti
(FIG. 19)
- B Dactyl of chela does not bear teeth; carapace membranous (i.e., relatively thin) and flattened weymouthi
(FIG. 20)

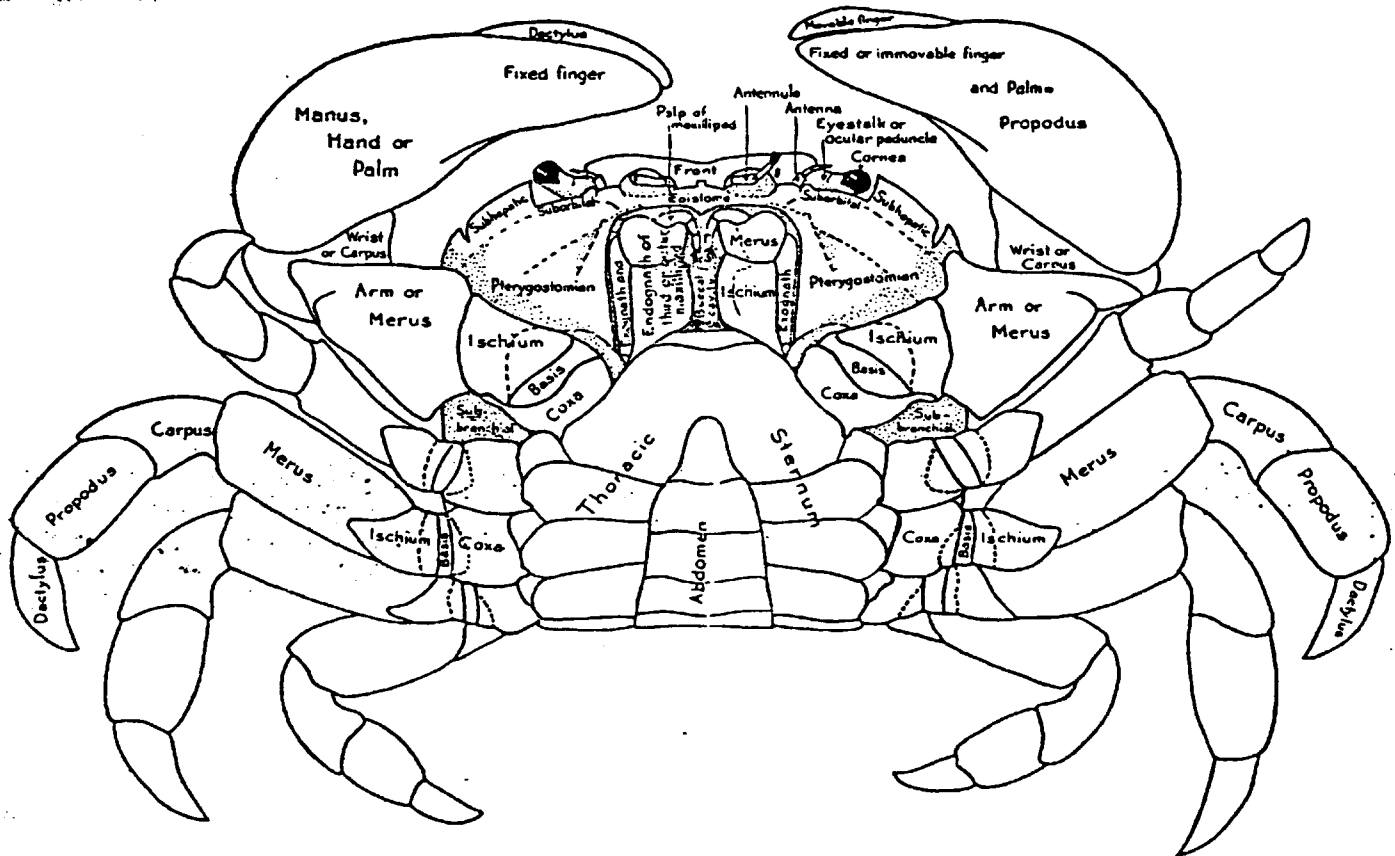
SELECTED PINNIXA REFERENCES

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- Schmitt, W.L. 1921. The marine decapod Crustacea of California. Univ. of Calif. Publ. Zool. 23: 1-470. (key and descriptions)
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GENERAL CRAB ANATOMY

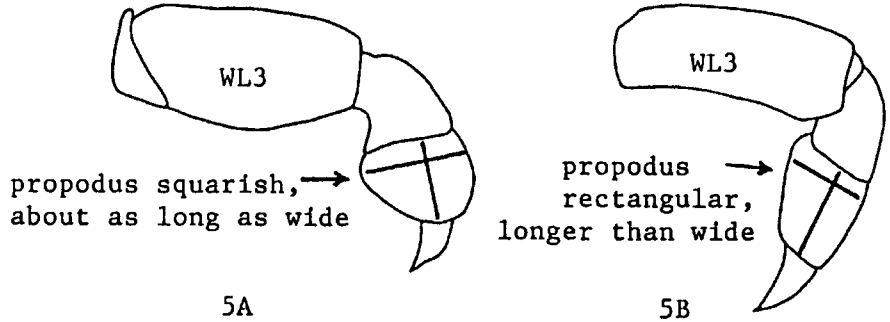
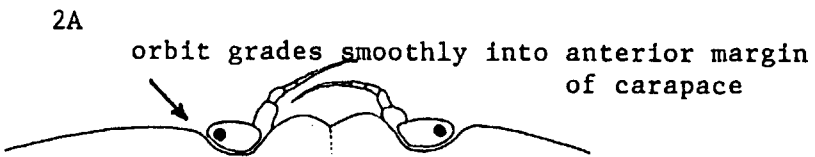
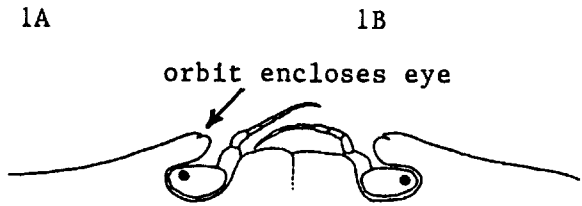
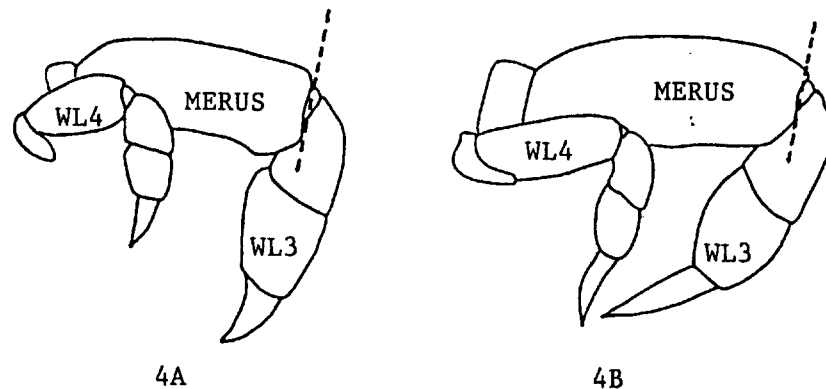
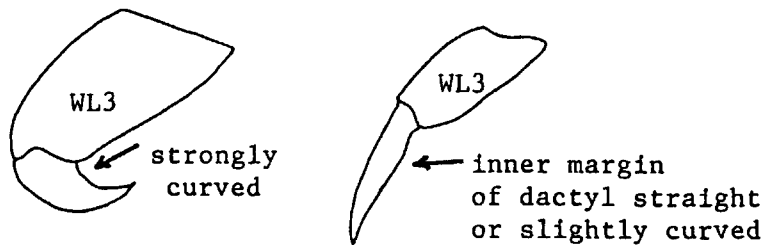


DIAGRAMMATIC DORSAL VIEW OF A GRAPSOID CRAB, SHOWING THE TERMS USED IN DESCRIPTION.

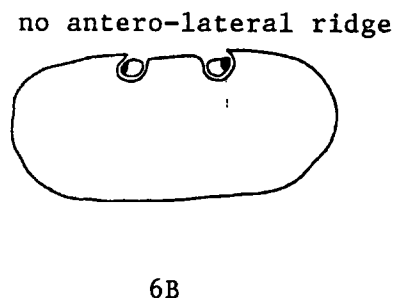
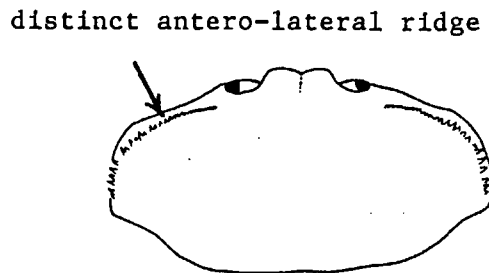
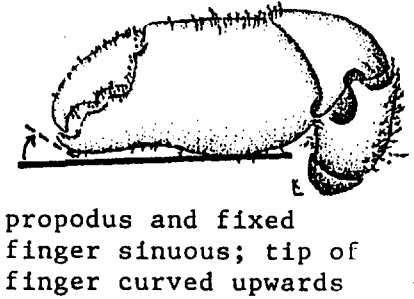
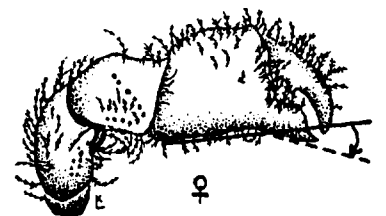
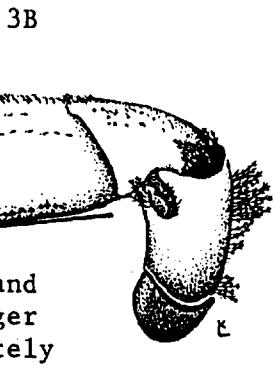
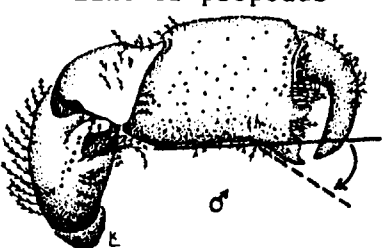


DIAGRAMMATIC VENTRAL VIEW OF A GRAPSOID CRAB, SHOWING THE TERMS USED IN DESCRIPTION.

PINNIXA KEY - COURTESY OF ILLUSTRATIONS



3A: fixed finger deflected downward relative to line of propodus

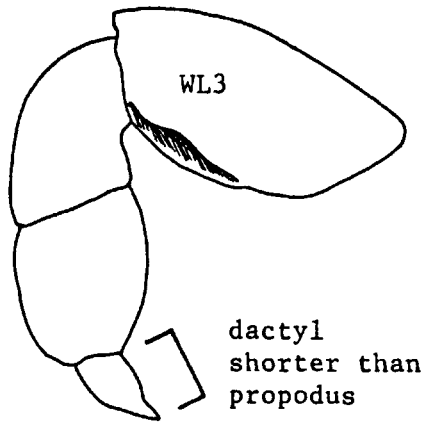


6A

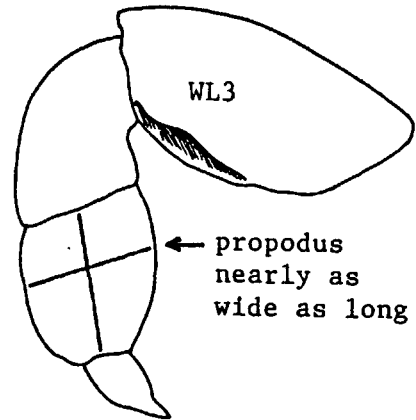
6B

PINNIXA KEY - COUPLET ILLUSTRATIONS

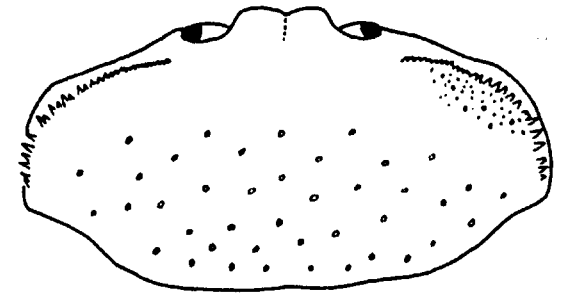
7A



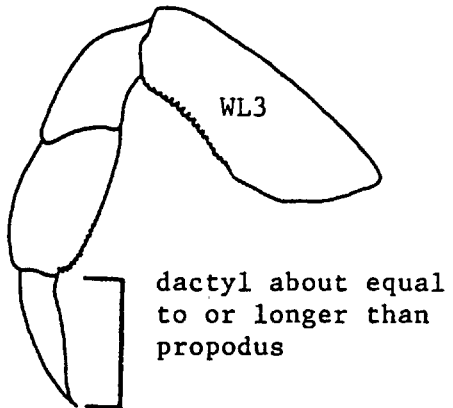
8A



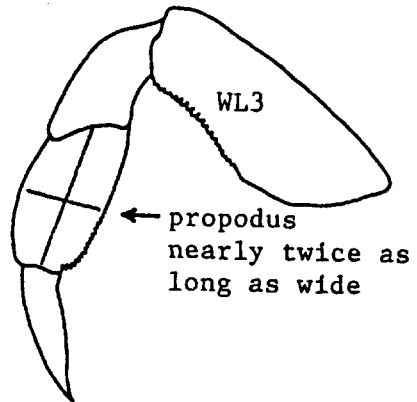
9A



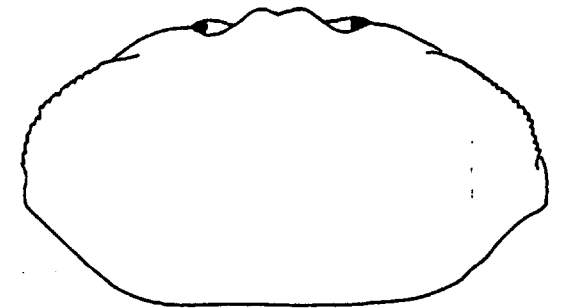
7B



8B



9B



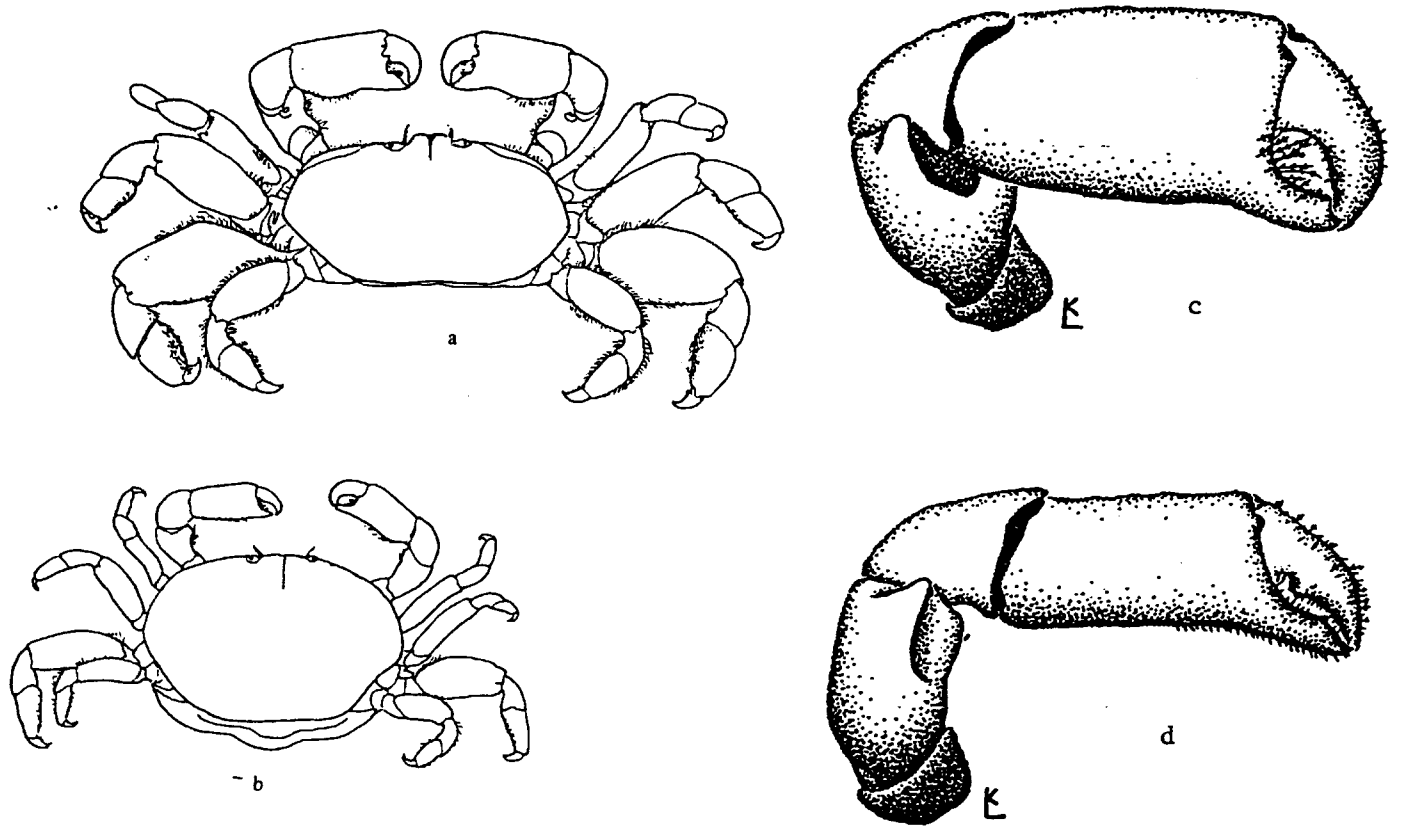


FIG. 10. *Pinnixa littoralis*: a, Male, dorsal view; b, Female, dorsal view (from Hart, 1982); c, Male, right cheliped, ventral view; d, Female, right cheliped, ventral view (drawings by K. Langan).

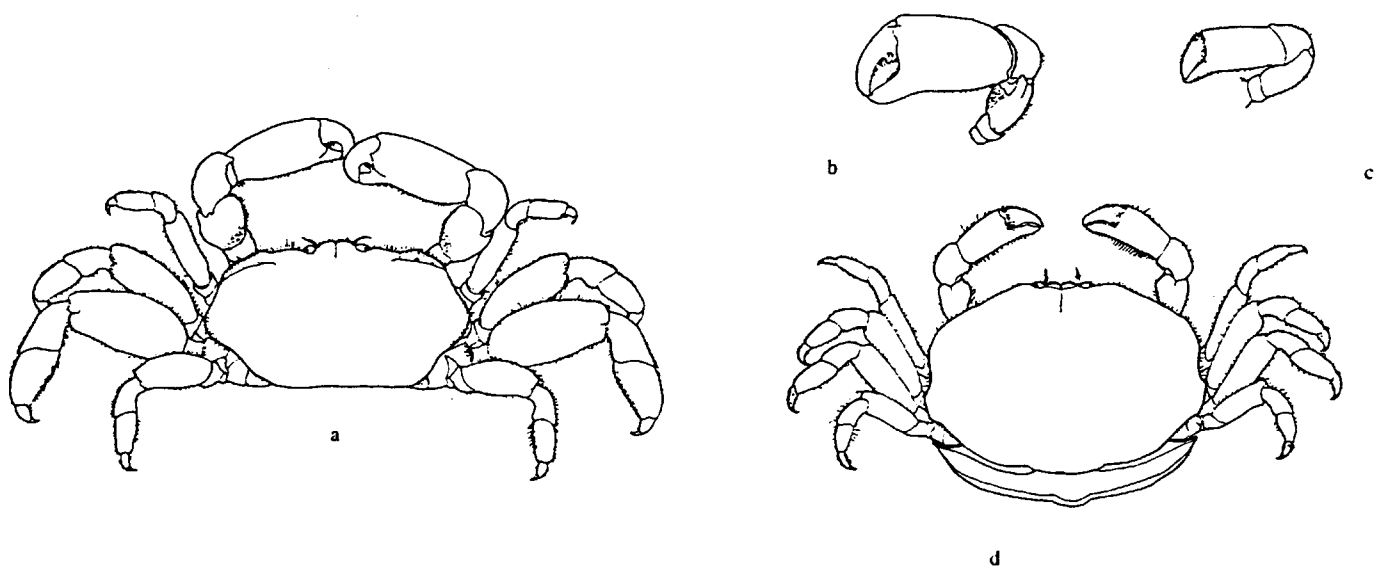


FIG. 11. *Pinnixa faba*: a, Male, dorsal view; b, Male, left cheliped, ventral view; c, Female, left cheliped, ventral view; d, Female, dorsal view (from Hart, 1982).

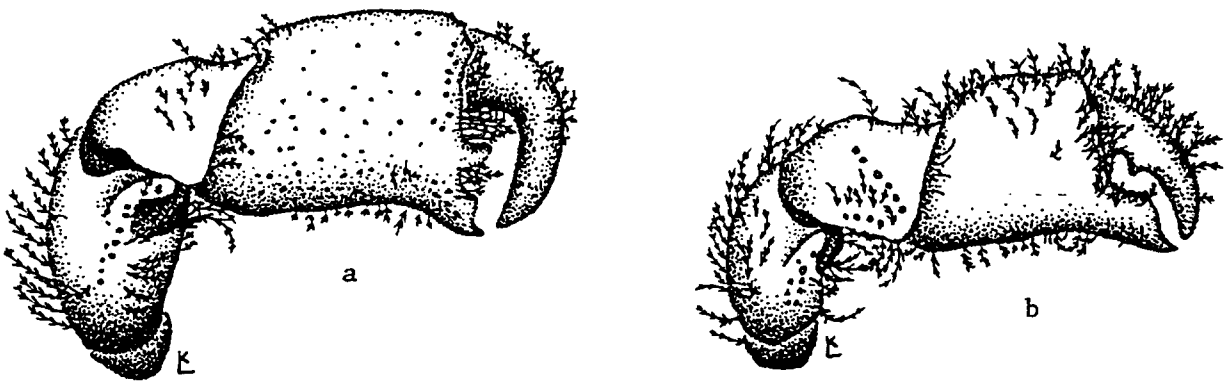


FIG. 12. *Pinnixa occidentalis*: a, Male, right cheliped, ventral view; b, Female, right cheliped, ventral view (drawings by K. Langan).

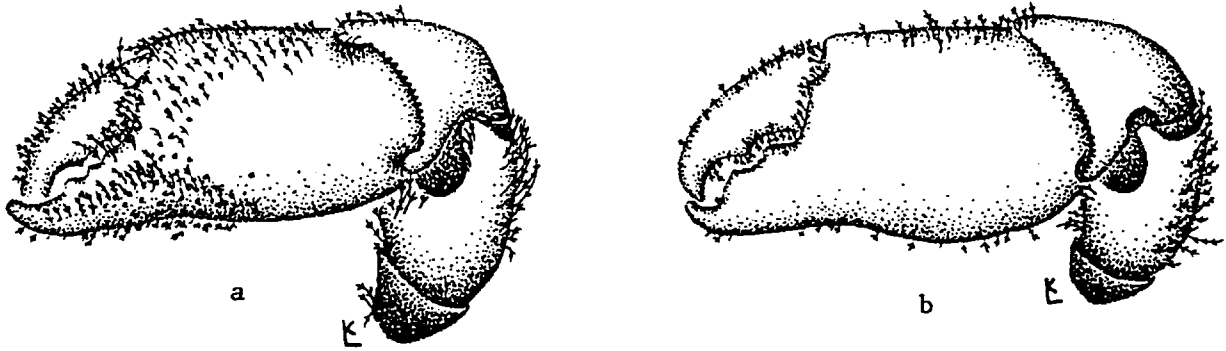


FIG. 13. *Pinnixa tubicola*: a, Male, left cheliped, ventral view; b, Female, left cheliped, ventral view (drawings by K. Langan).

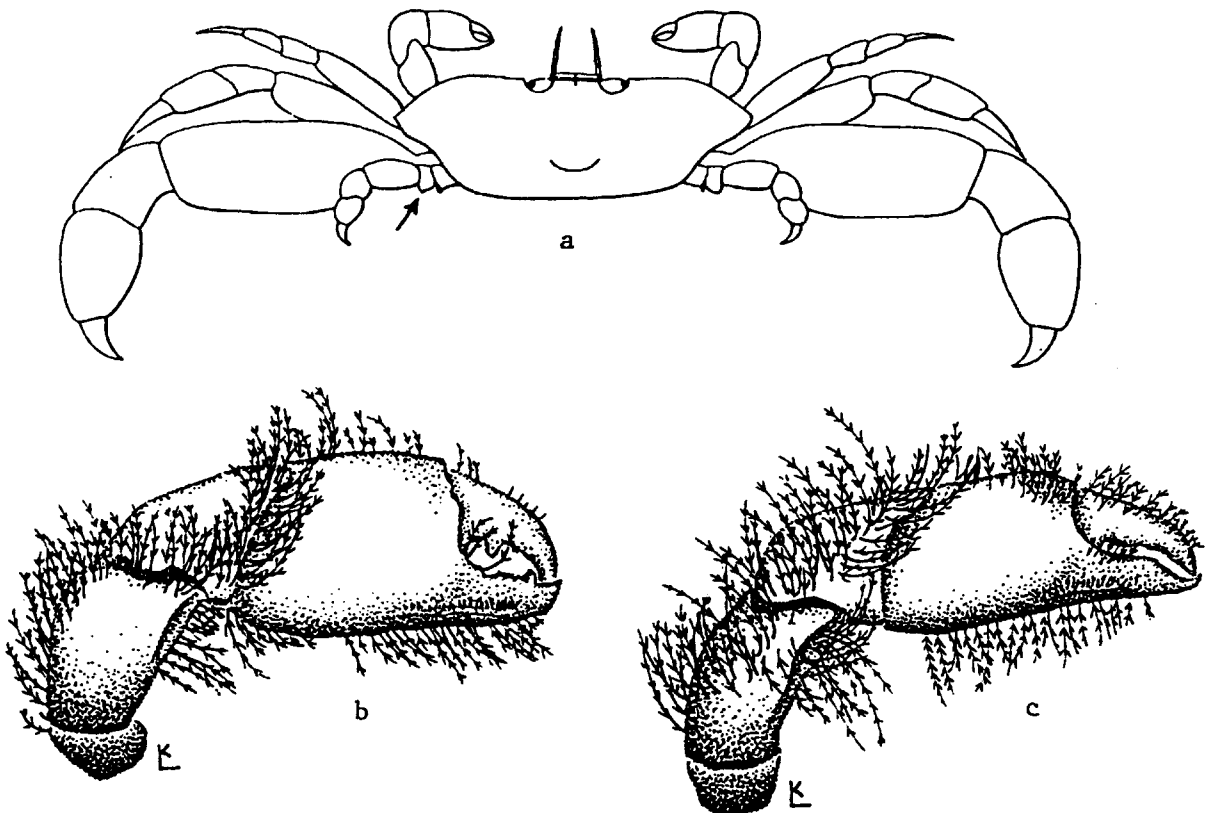


FIG. 14. *Pinnixa longipes*: a, General body outline (from Holmes, 1894); b, Male, right cheliped, ventral view; c, Female, right cheliped, ventral view (drawings by K. Langan).

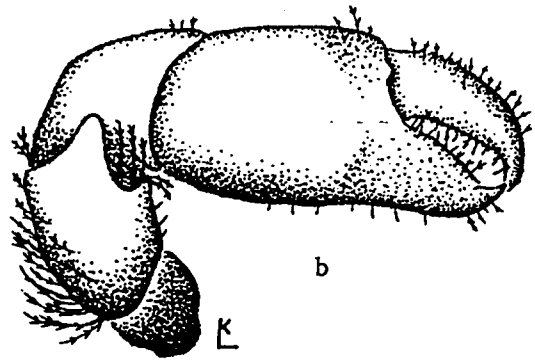
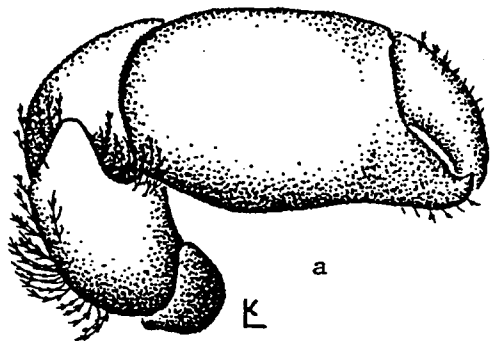


FIG. 15. Pinnixa tomentosa: a, Male, right cheliped, ventral view; b, Female, right cheliped, ventral view (drawings by K. Langan).

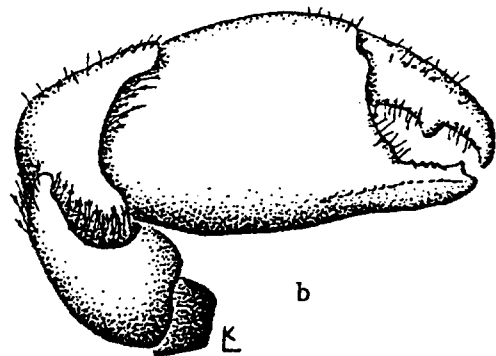
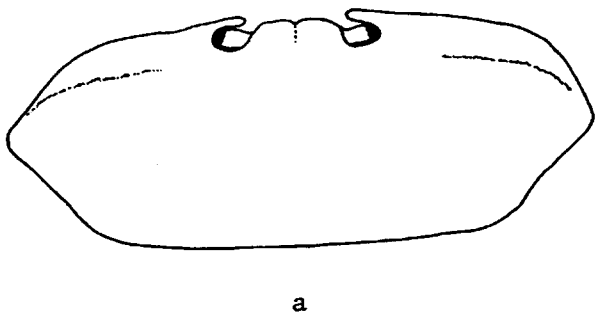


FIG. 16. Pinnixa hiatus: a, Female, dorsal view of carapace; b, Female, right cheliped, ventral view (drawings by K. Langan).

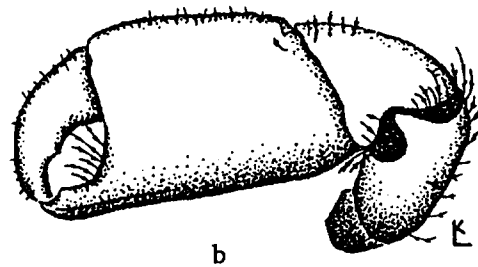
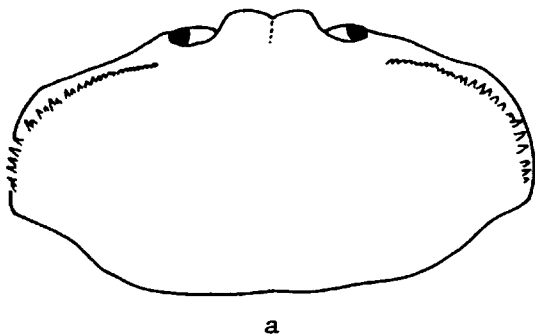
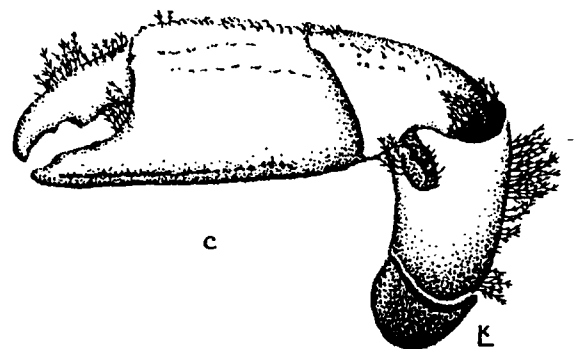


FIG. 17. Pinnixa franciscana: a, Small male, dorsal view of carapace; b, Male, left cheliped, ventral view; c, Female, left cheliped, ventral view (drawings by K. Langan).



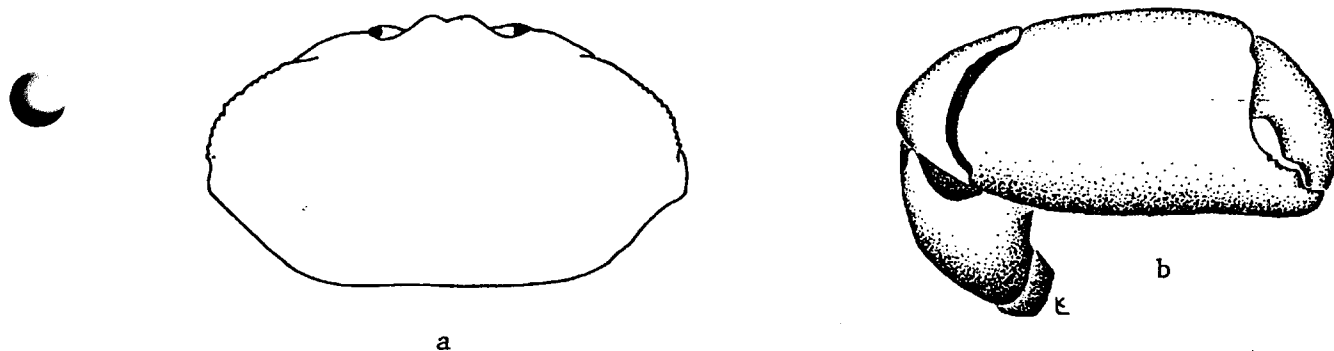


FIG. 18. *Pinnixa schmitti*: a, Male, dorsal view of carapace; b, Male, right cheliped, ventral view (drawings by K. Langan).

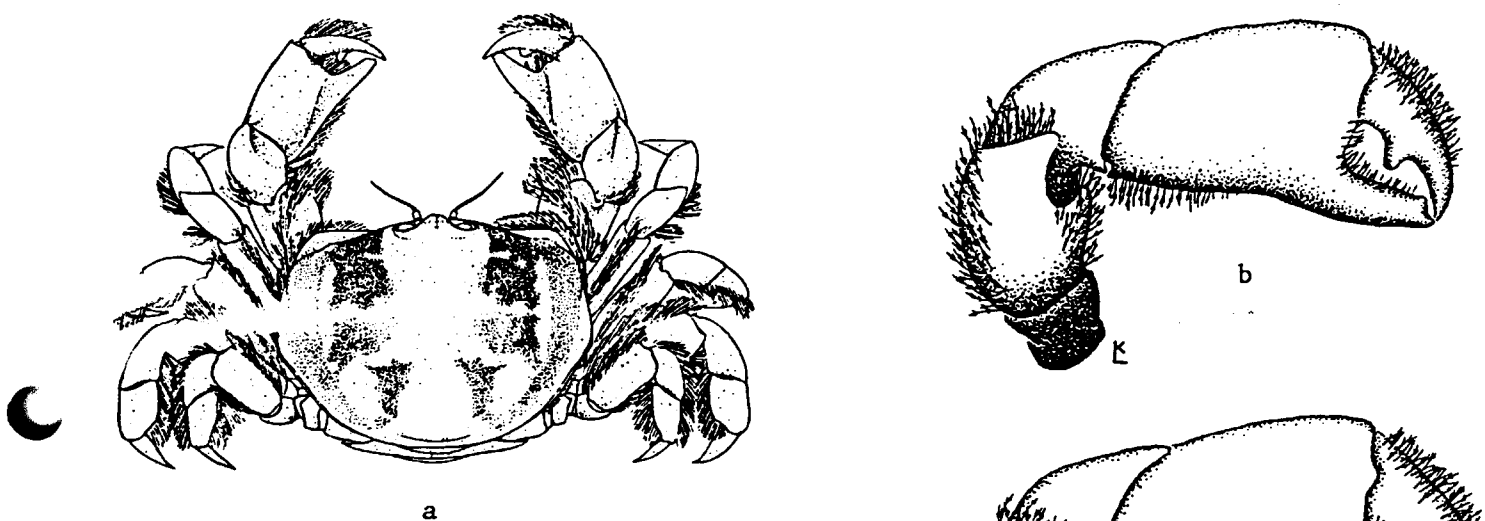


FIG. 19. *Pinnixa barnharti*: a, Whole specimen, dorsal view (from Allen, 1976); b, Male, right cheliped, ventral view; c, Female, right cheliped, ventral view (drawings by K. Langan).

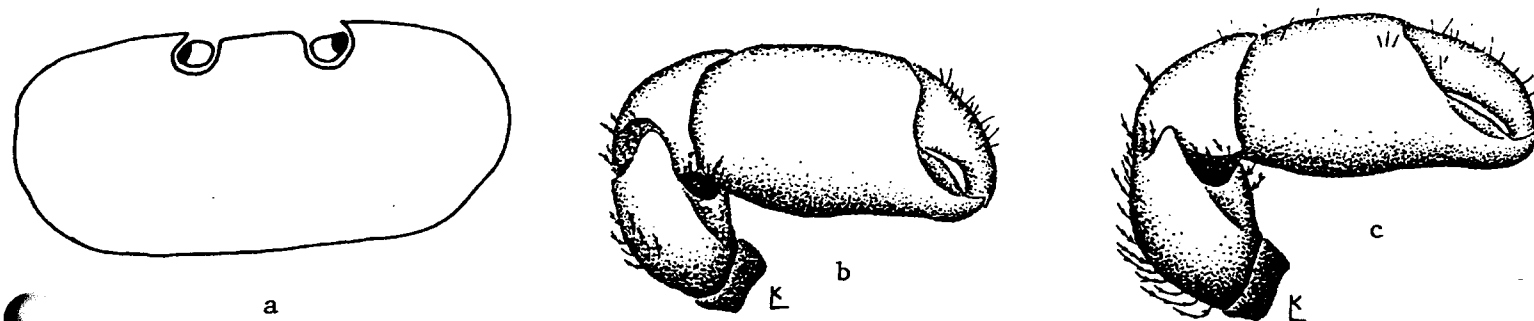


FIG. 20. *Pinnixa weymouthi*: a, Dorsal view of carapace; b, Male, right cheliped, ventral view; c, Female, right cheliped, ventral view (drawings by K. Langan).