

A Key to the Adult Salamanders of Pennsylvania

- 1 Four toes on each hind foot.....2
 1' Five toes on each hind foot.....3
- 2 Large salamanders (up to 18") with external gills.....
family Proteidae... Necturus maculosus
- 2' Small salamanders (up to 4") without external gills, tail with distinct, basal constriction
family Plethodontidae (part)... Hemidactylium scutatum
- 3 Large salamanders (up to 30") body flattened, with longitudinal wrinkles, one gill slit (but
 no external gills) in adult, toes with free, fleshy margins.....
family Cryptobranchidae... Cryptobranchus alleganiensis
- 3' Normal sized salamanders, (less than 12"), not as above.....4
- 4 Nasolabial grooves absent (use dissecting 'scope).....5
 4' Nasolabial grooves present (use dissecting 'scope).....family Plethodontidae (part)...9
- 5 Costal grooves present, ground color black, gray or brown....family Ambystomatidae...6
 5' Costal grooves virtually absent, longitudinal ridges on top of head, skin tuberculate &
 bright orange-red, or smooth & green to olive, always with two dorsal rows of red spots,
 tail fin on aquatic (green) adult.....family Salamandridae... Notophthalmus viridescens
- 6 Pattern of four to eight silvery white crossbands on dorsum.....Ambystoma opacum
 6' Not as above.....7
- 7 Dorsum without a pattern of light markings in life.....Ambystoma jeffersonianum
 7' Dorsum with pattern of white, yellow, or orange markings.....8
- 8 Dorsum usually with 2 rows of rounded, yellow or orange spots...Ambystoma maculatum
 8' Dorsum usually marked with an irregular pattern of white or orange spots, bars, or
 reticulations (only one locality record for PA).....Ambystoma tigrinum
- 9 Gular muscles making prominent swelling on either side of throat, hindlimbs usually
 noticeably larger than forelimbs, often a light line running from eye to posterior angle of
 mouth.....Desmognathinae... 10
 9' No prominent swelling on throat, hind limbs subequal, to somewhat larger than
 forelimbs, no light line from eye to angle of mouth.....Plethodontinae... 12
- 10 Tail round in cross section proximally; dorsal pattern, when present, usually consists of
 a broad dorsal light stripe with straight borders.....Desmognathus ochrophaeus
 10' Proximal portion of tail keeled above; dorsal pattern, when present, not as above....11
- 11 Dorsal pattern of dark reticular or worm-like markings on a lighter background (Western
 PA only).....Desmognathus monticola
 11' Dorsal pattern absent, or, if present, consisting of irregular spots or blotches, or a
 broad stripe with wavy, irregular edges.....Desmognathus fuscus

- 12 Toes with squared tips; green, lichen-like markings in life; flattened body, long limbs
.....Aneides aeneus
- 12' Toes normal; or, if slightly squared, then body black with small white dots..... 13
- 13 Tail keeled above, at least posterior half; ground color of yellowish, orangish, reddish,
or dull purplish in life..... 14
- 13' Tail rounded in section; ground color gray to black.....Plethodon... 18
- 14 Color orange, red, or dark purple in life, dark spots or flecks dorsally; tail shorter than
body; 16 or more costal grooves; at least 5 intercostal spaces between adressed
limbs; large, robust salamanders..... 15
- 14' Ground color yellowish in life; tail as long as or longer than body; 13 to 16 costal
grooves; fewer than four intercostal folds between adressed limbs; medium to small,
slender salamanders.....Eurycea... 17
- 15 Snout elongate, with canthus rostralis marked by a distinct white line bordered by black;
dorsum may have dark flecks, but never rounded dots.....Gyrinophilus porphyriticus
- 15' Snout shorter than above, canthus rostralis region without distinct white line bordered
by black; dorsum with round black dots.....Pseudotriton... 16
- 16 Iris yellow in life, dorsal spots small, numerous, crowded together....Pseudotriton ruber
- 16' Iris brown in life, dorsal spots large, fewer, widely separated.....Pseudotriton montanus ^α
- 17 Adressed limbs separated by 3 or more intercostal folds; broad dorsal tan or yellow
stripe on back bordered by black; tail of normal length..... Eurycea bislineata
- 17' Adressed limbs separated by 2 or fewer intercostal folds; sides spotted, tail long, with
distinctive herringbone pattern..... Eurycea longicauda
- 18 Limbs small, seven to ten intercostal folds between adressed limbs..... 19
- 18' Limbs larger, one to three intercostal folds between adressed imbs..... 22
- 19 Broad red stripe down back.....Plethodon cinereus (part)
- 19' Back dark in color, gray or black..... 20
- 20 Belly and chin with same pattern: uniform mixture of black pigment spots on a light
background: "salt-and-pepper" effect. 17 to 22 costal grooves.....
.....Plethodon cinereus (part)
- 20' Belly mostly dark colored, may have scattered white flecks, belly and chin may be
differently patterned. 20 or more costal grooves..... 21
- 21 Belly uniformly dark colored, throat dark with light colored flecks. 20 to 23 costal
grooves.....Plethodon richmondi
- 21' Belly and throat dark, but with some light flecking on both areas (especially laterally).
20 to 21 costal grooves.....Plethodon hoffmani
- 22 Blue-black with white flecks on sides and (usually) back, belly and gular region
uniformly dark gray, usually 16 costal grooves.....Plethodon glutinosus
- 22' Dark brown or brownish black with white flecks dorsally and white flecks or mottling
laterally, belly dark gray, chin lighter gray, usually 17 costal grooves...Plethodon wehrlei