

Identification guide for the Anderson's Crocodile Newt (*Echinotriton andersoni*) endemic to Japan, regulated by CITES appendix III

This guide helps to identify the Japanese endemic *Echinotriton andersoni* and to distinguish it from other species of the same genus and other related genera in Asia. It should be noted that this guide may not be complete, and it is difficult to visually identify the juvenile (young), larvae (tadpole), and egg specimens. Please consult experts for identification.

Basic information

Taxonomy

▶ Class	Amphibia
▶ Order	Caudata
▶ Family	Salamandridae
▶ Genus	<i>Echinotriton</i> Nussbaum et Brodie, 1982
▶ Species	<i>Echinotriton andersoni</i> (Boulenger, 1892)

Specie information

Common name	Anderson's Crocodile Newt, Anderson's Salamander
Body size	Total length: 130-190 mm, Snout-vent length:72-100 mm
Characteristics	Adults and juveniles of this rough-skinned newt inhabit the forest floor and hide themselves under logs or stones, and never go into the water. It is quite gentle and slow, and usually does not run away when disturbed.
Remarks	The species is designated as "National Endangered Species" (hereinafter referred to as "NES") under the Act on Conservation of Endangered Species of Wild Fauna and Flora (hereinafter referred to as "ACES"). Under the ACES, the hunting, gathering, killing, damaging or transfer of live NES are prohibited, and domestic trade in NES including designated parts and derivatives is therefore not permitted. Furthermore, the export of NES is also prohibited under the Foreign Exchange and Foreign Trade Act.



Egg on land



Larva in water

External morphology

Key 1 Rough skin but no scale



The newt has rough and moist skin, thus called as “Crocodile” Newt, however it is an amphibian without scale. The absence of scale can be recognized by touching the body. Some geckos’ skins are smooth due to tiny scales, but reptiles can not retract its eyes into head (the newt can retract its popped eyes).

Key 2 Body size



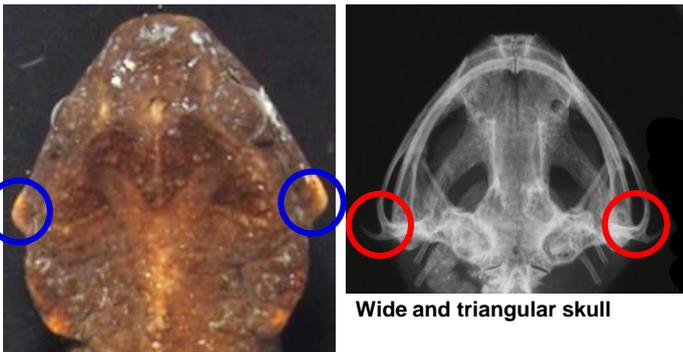
The body size is 130~190 mm in total, which is nearly same size of human palm (model person’s palm length = 190 mm). Amphibians have 4 fingers, but reptiles have 5 fingers (both have 5 toes).

Key 3 Dorsolateral rib nodules.



The newt has rib nodules on dorsolateral body (yellow circle), which correspond to the tips of ribs. The tips can be protruded out from the nodules, but such protrusion occurs quite rarely. The nodules are also found in the related genus *Tylotriton* but smaller than this genus.

Key 4 Spines on the corners of mouth



Wide and triangular skull

Unique character of *Echinotriton*, but not prominent externally (blue circles), which is confirmed more easily by use of X-ray photograph (red circles).



How to distinguish genus *Echinotriton* from other Asian newts

Echinotriton

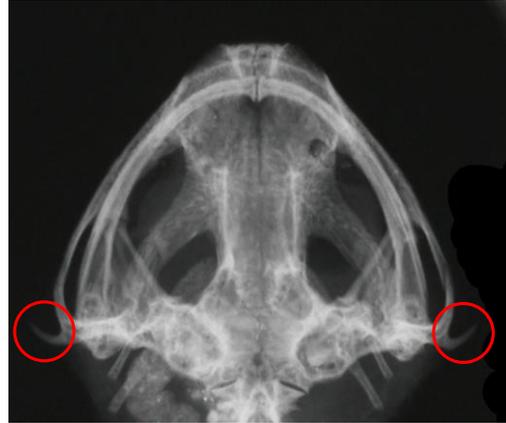
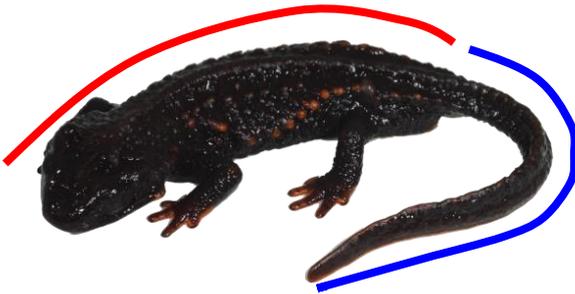
(Crocodile newt, Mountain newt)

Japan Appendix III

China Appendix II



Black belly



Wide and triangular skull
Spines on the corners of mouth (red circles)
→ see Key 4.

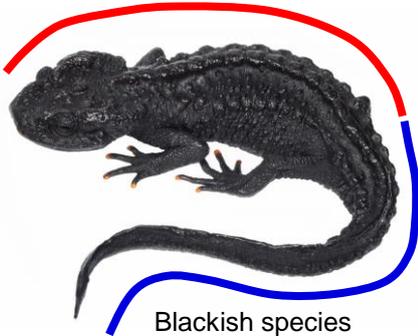
Head and body flattened and wide, short and pointed tail

Head & body \cong Tail

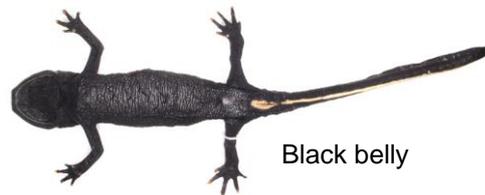
Tylototriton

(Crocodile newt)

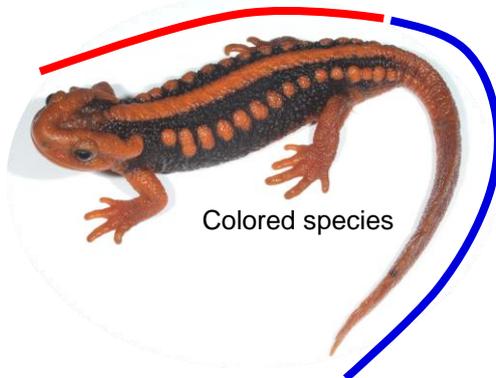
East, Southeast & South Asia Appendix II



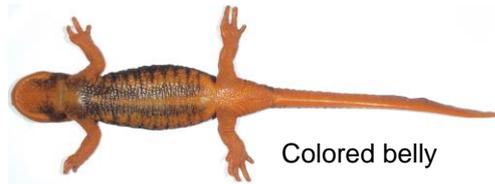
Blackish species



Black belly



Colored species



Colored belly



Wide and triangular skull
No spines on the corners of mouth
(blue circles) → see Key 4.

Long and flattened tail

Head & body $<$ Tail

Paramesotriton (Warty Newts)

East & Southeast Asia Appendix II



Reddish spots on belly



Narrow head



Smaller and thinner body, no rib nodules, and strongly flattened tail

other newt

Other species often traded

Cynops ensicauda
(Swordtail Newt) **Japan**



Rough skin, narrow head and no granules



Reddish markings on belly

Cynops orientalis
(Chinese Fire-bellied Newt) **China**



Small body, narrow head and smooth skin

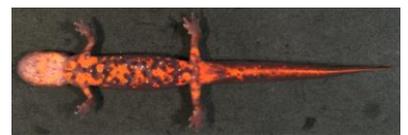


Reddish markings on belly

Pachytriton granulosus
(Spotless Stout Newt) **China**



Strongly curved epibranchial



Reddish marking on belly

Pachytriton changi (= *P. xanthospilos*)
(Chang's Stout Newt) **China**



Narrow head, smooth skin and strongly flattened tail

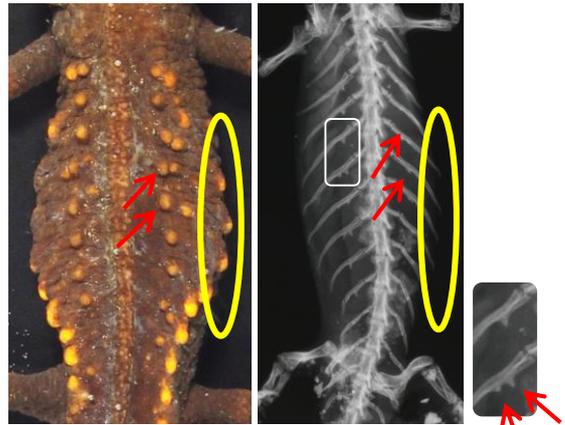
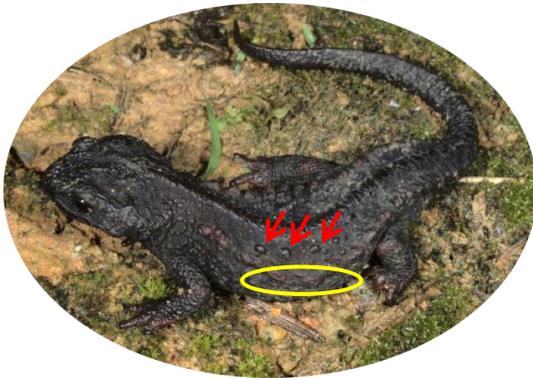


Yellowish spots or reddish markings on belly

How to distinguish *Echinotriton andersoni* from other species of the same genus

Echinotriton andersoni

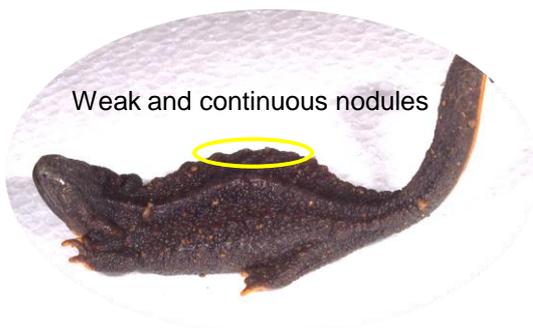
Japan Appendix III



Bony projection on dorsal rib (red arrows)
Prominent rib nodules (yellow circle)

E. chinhaiensis

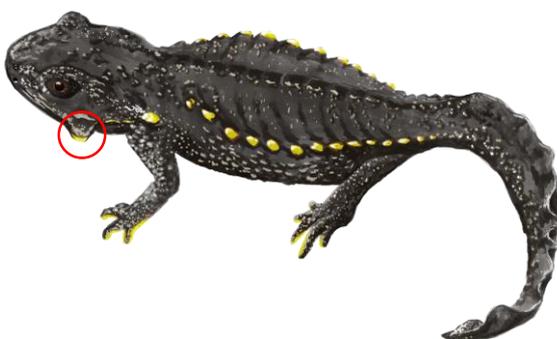
China Appendix II



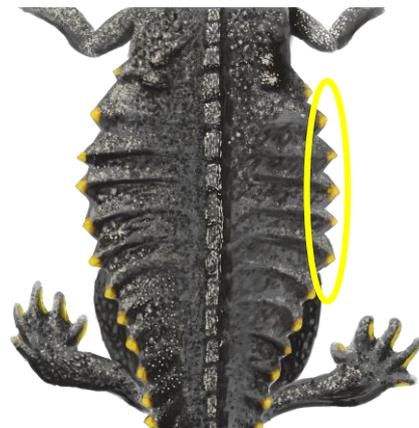
No bony projection on dorsal rib
Weak rib nodules (yellow circle)

E. maxiquadratus

China Appendix II



Distinct bony spines on the corners of mouth
(red circle).



No bony projection on dorsal rib
Prominent rib nodules
(yellow circle)