Species in the Conservation Education Role — 89 species

Species that are specifically selected for management – primarily in zoos and aquariums - to inspire and increase knowledge in visitors, in order to promote positive behavioural change. For example, when a species is used to raise financial or other support for field conservation projects (this would include clearly defined 'flagship' or 'ambassador' species).

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
Anaxyrus baxteri	4.553204971	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Lannoo - thinks they're not EW, as he saw some natural-breeding events, not just introduced ones; (but doesn't recommend changing Red List). Ex situ research notes: All - annual tadpole mortality; missing aspect of reintroduction survival (reinvestigate current practices, i.e., stage-specific survivorship post-release); nutrition for females; comparative studies (i.e. woodhousii);					
Anaxyrus houstonensis	4.553204971	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Crump/Gluesenkamp - education will be important to get private landowners to help, TPWD student program in place & youth Toad Trackers (Houston Zoo) Ex situ research notes: Habitat assessment for microhabitat needs (for toads) per Paul Crump					
Plethodon ainsworthi	30.07718822	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Extinct species - but we evaluated it with the understanding that if it reappears; education warranted, if rediscovery; Dodd - distinctive morphologically - elongated and skinny. Ex situ research notes: Nothing known as only from limited preserved specimens. Need to study natural history and causes of declines warranted, if rediscovered.					
Ambystoma bishopi	42.62276683	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: May qualify as endangered; Dodd - ongoing studies by Fla F&GC; Dodd - protection is Eglin AFB & Apalachicola WA; Barber - Jacksonville Zoo has plans to reintroduce in future; Dodd/Barrett - threats are climate change (droughts) and no one else is filling breeding ponds (Barrett - mitigation - habitat loss/ increased connectivity/landscape level occupancy/fill ponds). Barrett - so few populations left, expect difficult to resolve issue. Dodd - analog for cingulatum (which is even more critical); Dodd - education (attractiveness, habitat, regional endemic); Ex situ research notes: natural history lacking					
Ambystoma californiense	42.62276683	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Lannoo - new threat is genetic pollution from introduced tiger salamanders; Gluesenkamp- extirpation includes fish in stock pools; Gluesenkamp mentions that hybridized specimens could be culled from ponds. Gluesenkamp - bred by Brad Schaffer (now at UCLA); Gluesenkamp- "Poster child" for loss of Valley ecosystems.					
Ambystoma cingulatum	42.62276683	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
	General notes: Dodd - possibly extinct in SC/GA, but FL populations known extant in last two years; Barrett - not seen in GA in more than a decade; Bishop is an analog for this species.; All - regional species awareness and threat awareness would be beneficial similar to small range species, Range state approval (Barrett - no in GA, Dodd - FL is ?, and Riverbanks were wild caught, so potentially possible). Ex situ research notes: Natural history lacking				
Cryptobranchus alleganiensis	92.48579987	Aspect of biology shared with <6 other species	Yes	No research dependent on this species	Yes
	General notes: bishopi needs to be pulled out as a full species and has been federally listed as Endangered (Weir said check with Jeff Briggler in Missouri) and the eastern populations are not doing well either; Phillips - St Louis Zoo has noted the captive issue low sperm motility (water quality issues per Mark Wanner); unique based on phylogenetic uniqueness and is large (3rd largest salamander species); cultural history high profile in Appalachia & Ozarks - All; historically collected/eradicated - now elevated to Appendix 1 to reduce this; C. allagenensis is a good analog for bishopi; educate fishermen that they do not compete for fish/shouldn't be killed during gigging practices per Phillips; phylogenetics still inconclusive per Phillips. Ex situ research notes: Low sperm motility; disease issues; plasticizers/pollutants in stream waters; Subspecies bishopi may require varied/different management recommendations based on more restrictive range.				
Lithobates sevosus	6.878410402	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Hanna - TNC has bought up wetland sites for potential reintroduction; Lannoo - has been challenged for economic reasons for ESA (development); Memphis Zoo translocated some recently; Assisted Reproduction Technology used to produced frogs. Ex situ research notes: Research required into disease and nutrition of captive population.				
Rana draytonii	8.126774325	No aspect of biology known to be exceptional	Yes	No research dependent on this species	Yes
	General notes: Reintroduced in CA; with recovery plan (Becklin); Mark Twain's jumping frogs/festival - celebrated species (local species, large charismatic, habitat decline for education). Ex situ research notes: Research into husbandry in preparation for recovery plan actions; for biocontrols for chytrid fungus; LA Zoo developed protocol for management.				
Eurycea rathbuni	19.13456707	Aspect of biology shared with <6 other species	Yes	Research dependent upon <6 species (incl. this taxon)	Yes
	General notes: Chippendale/Gluesenkamp/Chamberlin - southern Edwards' Plateau, lives under the range of nana; potential habitat reintroduction at Wonder Cave (part of natural range); exceptionally extreme trogolbite in Amphibia (more than olm in our opinion!); cultural - on beer/wine, research ; analog for waterlooensis and robusta; Education for Edwards Aquifer biodiversity (flagship) Ex situ research notes: Research required into environmental contamination; developmental biology; eye development.				
Dicamptodon ensatus	57.76183689	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
	General notes: Incidental threat mitigation as a result of fish population management (salmon); use locally as ambassador for salamanders.				
Necturus alabamensis	63.28963894	No aspect of biology known to be exceptional	No	No research dependent on this species	No
	General notes: Keyster keeping them (using beyeri as an analog) with intention of program.				
Rhyacotriton kezeri	59.00234597	No aspect of biology known to be exceptional	No	No research dependent on this species	No
	General notes: Hassock - streamside buffer laws in WA.				
Rana pretiosa	8.126774325	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: It is a candidate species for ESA; doesn't appear to be continuing declines (Becklin/Hassack); reintroduction deemed unknown success, but found egg masses in 2011; head-start program using prison inmates to care for animals (going well), and actively used by head-start program facilities as umbrella for native amphibian declines; phylogenetics in progress (Hassock). Ex situ research notes: Research for herbicide testing in progress; husbandry.				
Dicamptodon copei	57.76183689	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Hassack - managed incidental to fishing management (salmon); use locally as example of large salamander.				
Gyrinophilus gulolineatus	22.36432382	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: In captivity at UTENN & Knoxville Zoo (Nate Haislip - FWZ).				
Phaeognathus hubrichti	42.34725828	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Local regional species - increase awareness of its fossorial presence. Ex situ research notes: Natural history data lacking.				
Lithobates fisheri	6.878410402	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
Necturus lewisi	103.0085382	No aspect of biology known to be exceptional	No	No research dependent on this species	No
	General notes: Lannoo - accumulates PCB toxins; rapidly urbanizing areas (siltation, etc.) per Dodd.				
Ascaphus montanus	109.8929049	Aspect of biology shared with <6 other species	No	No research dependent on this species	Yes
	General notes: Lannoo/Phillips- external intermittent organ makes it unique! All - education potential is phylogenetic uniqueness.				
Ascaphus truei	109.8929049	Aspect of biology shared with <6 other species	No	No research dependent on this species	Yes

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
	General notes: Gluesenkamp - timber harvest/erosion control, but rules to balance as logging varies across range; Lannoo/Phillips- external intermittent organ makes it unique!; kept at Sedgwick Co Zoo (Nate Nelson - possibly bred).				
Lithobates areolatus	6.878410402	Aspect of biology shared with <6 other species	No	No research dependent on this species	Yes
	General notes: Lannoo - one of the most secretive frogs in NA, undergoing a recent & precipitous decline; Obligate requires another species makes it biologically exceptional - All; cryptic species for grassland and conservation efforts for education; Lannoo - state endangered in IN and IA, and special concern in KS, few populations throughout rest of range.				
Necturus maculosus	103.0085382	Aspect of biology shared with <6 other species	No	No research dependent on this species	Yes
	General notes: Analog for genus Necturus, especially alabamensis ; host to a freshwater mussel (Glocidia sp.); introduced into Conn. River (Weir); commercially valuable for scientific industry; education value for awareness of genus.				
Rhyacotriton olympicus	59.00234597	No aspect of biology known to be exceptional	No	No research dependent on this species	No
	General notes: Hassock - park surrounded by managed timberland so effectively managed; lowest thermal tolerance of any species.				
Pseudobranchus axanthus	107.4937262	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
	General notes: Exceptional because it has only 2 limbs.				
Pseudobranchus striatus	107.4937262	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
	General notes: Exceptional because it has only 2 limbs; kept and bred at Riverbanks Zoo.				
Anaxyrus nelsoni	4.553204971	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Hassack - threats from off-road vehicles; Dodd - fewer than 2,000 individuals per Simandle; Philips says this species is similar to exsul (so taxonomic review is likely).				
Rana muscosa	8.126774325	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Becklin - species was split in 2007 into sierrae (southern) & muscosa (northern range); largest declines in muscosa is federally endangered in CA, but the rest of the range is; sierrae is state listed and candidate for federal listing (Grow); main threat is Bd and invasive species; already in captivity with husbandry in progress, so can be used as an analog for other high elevation ranid species (cascase and sierrae); education for species awareness support for conservation of species. Ex situ research notes: Biocontrol for chytrid fungus.				
Rana sierrae	8.126774325	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Becklin - translocations to a novel site within range; Vredenburg has had them in the lab for a while; education for species awareness support for conservation of species.				

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
Spea hammondii	48.63275816	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
General notes: Becklin - being held by many private individuals.					
Plethodon nettingi	18.80609683	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Weir - Pauly said that he wouldn't focus more on this species than other more critical species within WV; Education: mountaintop species for WV and advocate against mountaintop mining.					
Notophthalmus meridionalis	18.39798835	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Gluesenkamp - awareness and overall pond and rosacas habitat protection on private property; ANDYG - confirm with Gabrielle Parras about phylogenetics.					
Ambystoma opacum	42.62276683	Aspect of biology identified that is unique to species	No	No research dependent on this species	No
General notes: Lannoo - fall breeder with terrestrial eggs require lack of oxygen/withstand carbon dioxide and Phillips - they can withstand freezing temps; Poole - scientific research potential seems lacking!					
Amphiuma pholeter	64.34729874	No aspect of biology known to be exceptional	No	No research dependent on this species	No
General notes: Phillips - basic life history lacking; phylogenetics have been completed. (1) animal in captivity at Philly Zoo per ISIS. Ex situ research notes: Natural history lacking.					
Siren intermedia	79.40989812	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
General notes: Exceptional - forelimbed only and omnivorous adult stage (vegetation); number of undescribed species from S. Texas (contact Mike Forstener) and Florida (contact Paul Moler).					
Siren lacertina	79.40989812	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
General notes: Exceptional - forelimbed only and omnivorous adult stage (vegetation).					
Pseudacris illinoensis	9.884863172	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
General notes: Exceptional because it uses forelimbs for burrowing (only 4 species including streckeri and two in Africa).					
Rhyacotriton cascadae	59.00234597	No aspect of biology known to be exceptional	No	No research dependent on this species	No
Anaxyrus exsul	4.553204971	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Dodd - some populations found by Richard Tracy (UN - Reno) to expand range; Lannoo - Deep Springs College performing management work (grazing); culturally important as entire range on college grounds. The animal is on a beer bottle label so may have some cultural significance (Barber).					

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
Lithobates capito	6.878410402	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Analog for L. sevosa; captive reared, but no knowledge of being bred within group; life-cycle education for species awareness; Lannoo - in process for being petitioned.				
Lithobates chiricahuensis	6.878410402	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Barber - suggests that this species be re-evaluated fully; education - local awareness for conservation efforts (in place). Ex situ research notes: Disease research - peptide and husbandry research.				
Lithobates tarahumarae	6.878410402	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Has been reintroduced per Dodd; also occurs within Mexico.				
Lithobates yavapaiensis	6.878410402	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Dodd - declines noted in Imperial Valley CA, but previously noted in 2004 GAA; bred at AZ Sonoran Desert Museum; education - benefit for local awareness.				
Rhinophrynus dorsalis	190.6732646	No aspect of biology known to be exceptional	No	No research dependent on this species	No
	General notes: Northern edge of native range in southern TX, but population is stable in Central America; species of concern in TX; have been maintained at Gladys Porter Zoo.				
Eurycea sosorum	19.13456707	No aspect of biology known to be exceptional	Yes	Research dependent upon species	Yes
	General notes: Chippendale/Gluesenkamp/Chamberlain - southern Edwards' Plateau; impervious cover limits within county; cultural - locally recognized species; analog for others within southern complex; needs more outreach to help awareness (water quality, species issues). Ex situ research notes: Natural history; water quality.				
Eurycea tonkawae	19.13456707	Aspect of biology shared with <6 other species	No	Research dependent upon species	No
	General notes: Chippendale/Gluesenkamp/Chamberlain - northern Edwards' Plateau; Scientifically important - skeletal resorption (hormone leptin impacting osteoporosis), which may make it exceptional as it's only one know to shrink/grow on own.				
Eurycea waterlooensis	19.13456707	Aspect of biology shared with <6 other species	Yes	No research dependent on this species	Yes
	General notes: Chippendale/Gluesenkamp/Chamberlain - southern Edwards' Plateau; lives under the range of E. sosorum; water quality threats are reversible per Chamberlian; exceptional as troglobites (along with rathbuni); locally culturally important; Education - local aquifer, unique biology within range, diversity.				
Aneides hardii	23.87352177	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
	General notes: Fire management would be helpful - Lannoo.				
Lithobates sylvaticus	8.58388152	Aspect of biology shared with <6 other species	No	Research dependent upon <6 species (incl. this taxon)	Yes
	General notes: Unique as species that lives within arctic circle; antifreeze; education - vernal pool species, freezing capabilities. Ex situ research notes: Cryopreservation research.				
Spea bombifrons	48.63275816	Aspect of biology shared with <6 other species	No	No research dependent on this species	Yes
	General notes: Lannoo - difficult to detect; Lannoo - has cannibalistic morphs triggered by high density (in Spea only, not Scaphiopus) makes exceptional; analog for other Spea - life history (cannibalism).				
Spea intermontana	48.63275816	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
	General notes: Hassack - gave details ; Lannoo - has cannibalistic morphs triggered by high density (in Spea only, not Scaphiopus) makes exceptional.				
Spea multiplicata	48.63275816	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
	General notes: Lannoo - has cannibalistic morphs triggered by high density (in Spea only, not Scaphiopus) makes exceptional.				
Ambystoma jeffersonianum	42.62276683	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
	General notes: Weir - protected by states in Northeast ranges; Chippendale - some hybridization and unisexual lineages, so recommended as dealing with this population as true jeffersonianum, and deal with the other group [hybridized/unisex group] separately. Phillips - polyploidy and hybridization unisexual, unique with just water frogs.				
Ambystoma laterale	42.62276683	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
	General notes: Phillips - polyploidy/ hybridization.				
Ambystoma tigrinum	42.62276683	No aspect of biology known to be exceptional	Yes	No research dependent on this species	Yes
	General notes: Lannoo - split into malvortium (westerns), but both species ar Dodd - reintroduced into NJ/ MD barrowpit project is questionable; Crump - deliberate reintroductions across range. Dodd - cannibalistic paedomorphs alternative life history strategy (fewer than 10-20 species worldwide); Dodd - bait species (Poole - disease spread potential); Barber - use as analog for mexicanum; All - education potential: invasive species, large charismatic.				
Plethodon shenandoah	18.80609683	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: climate change & acid deposition gives this species a lot of attention so it is receiving active management; Weir - Education potential for public and park management to recognize local special species (mountaintop, climate change, flagship, endemic) Ex situ research notes: Climate change impacts (i.e., burrowing depth) for mountaintop species.				

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
Dicamptodon aterrimus	57.76183689	No aspect of biology known to be exceptional	No	No research dependent on this species	No
General notes: Some kept in labs and some private collections.					
Dicamptodon tenebrosus	57.76183689	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Analog for ensatus; education - locally as ambassador for larger salamander.					
Amphiuma means	64.34729874	No aspect of biology known to be exceptional	No	No research dependent on this species	No
General notes: Phillips - basic life history lacking; phylogenetic work is completed; used as analog for pholeter. Ex situ research notes: Natural history lacking.					
Amphiuma tridactylum	64.34729874	No aspect of biology known to be exceptional	No	No research dependent on this species	No
General notes: Phillips - basic life history lacking; phylogenetic work is completed; used as analog for pholeter Ex situ research notes: Natural history lacking.					
Ensatina eschscholtzii	59.94681912	No aspect of biology known to be exceptional	No	No research dependent on this species	No
General notes: Crump - said Keyster bred this species.					
Hemidactylium scutatum	83.73466499	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Education - climate change and interesting life history (Glusenkamp).					
Necturus beyeri	63.28963894	No aspect of biology known to be exceptional	No	No research dependent on this species	No
General notes: Kept in Central FL, Miss River Museum and Jacksonville.					
Necturus lodingi	63.28963894	No aspect of biology known to be exceptional	No	No research dependent on this species	No
Necturus punctatus	63.28963894	No aspect of biology known to be exceptional	No	No research dependent on this species	No
General notes: Phylogenetic research needed.					
Rhyacotriton variegatus	59.00234597	No aspect of biology known to be exceptional	No	No research dependent on this species	No
General notes: Hassock - analog for all other Rhyactriton.					
Anaxyrus boreas	4.553204971	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
General notes: Dodd - some populations found by Richard Tracy (UN - Reno) to expand range; in decline in south and east due to Bd; Analog for exsul; Glusenc - widely recognized as flagship for range (manageable); mandates are state specific.					
Eurycea spelaea	19.13456707	Aspect of biology identified that is unique to species	No	No research dependent on this species	No

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
	General notes: Exceptional because noted recently to consume bat guano - so only coprophagic amphibian! Larval are surface and go back into caves as adults (and grow skin over eyes to protect them during life above ground); threats are water quality and non-native fish predators; this species may be split up per Chippendale.				
Incilius alvarius	4.289149953	No aspect of biology known to be exceptional	Yes	No research dependent on this species	Yes
	General notes: Dodd - northern clade of this Genus has been renamed Ollotis (similar to nebulifer); Dodd - population goes down into Central America; toad-licking lists as Class 2 by FDA; big pretty toad for education and native American (Olmec) significance. Adam - ask Bureau of Reclaination on Colorado River.				
Pseudacris streckeri	9.884863172	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
	General notes: Exceptional because it uses forelimbs for burrowing (only four species including streckeri and two in Africa).				
Lithobates catesbeianus	8.58388152	No aspect of biology known to be exceptional	Yes	No research dependent on this species	Yes
	General notes: Dodd - the FL bullfrog should be separated out recently as it is of hybrid origin (L heckscheri and something else) - description pending from Crother et al; Gluesenkamp - notes that the management need is based on native vs. introduced range within TX, but Lannoo also notes that the historic native range is still open to interpretation; education/culturally significant - introduced exotic, large charismatic amphibian, food species, disease spread, etc.				
Lithobates grylio	8.58388152	No aspect of biology known to be exceptional	Yes	No research dependent on this species	No
	General notes: Dodd - most harvested in FL and LA.				
Eurycea robusta	19.13456707	Aspect of biology shared with <6 other species	No	No research dependent on this species	No
	General notes: Chippendale/Gluesenkamp/Chamberlin - southern Edwards' Plateau; known from very few specimens which hasn't been seen in a while; exceptional because of extreme troglobitism.				
Eurycea wallacei	19.13456707	Aspect of biology shared with <6 other species	No	No research dependent on this species	Yes
	General notes: Weir - noted genus has been updated to Haideotriton, but it may not be recognized; Dodd - one of the blind group makes it exceptional; Education - local awareness campaign. Ex situ research notes: Life history research (Dante Fenolio at Atlanta Botanical Gardens).				
Hyla andersonii	5.948871853	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Education - used within NJ Pine Barrens flagship species (Weir).				
Pseudacris cadaverina	9.884863172	No aspect of biology known to be exceptional	No	Research dependent upon <6 species (incl. this taxon)	No
	General notes: Becklin - basking behaviours have lead researchers to investigate its potential for sunscreen development.				
Scaphiopus holbrookii	49.54384778	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
	General notes: Working on introduction now in MA (Brian Windmiller), so outcome pending, with education component (student releasing them).				
Ambystoma macrodactylum	42.62276683	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Lannoo - one of the subspecies is Federally protected, but this process only deals with species level only, so ignored; Phillips - Santa Cruz attempted reintroduction (Ask Adam); Glusenc. - local awareness/education program for Santa Cruz would be helpful for subspecies (thru FWS/CFG program in place by Dodd).				
Ambystoma maculatum	42.62276683	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Phillips - some reintroductions somewhere; education potential as representative salamander within range.				
Anaxyrus americanus	4.553204971	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Analog for many other toad species (i.e., Wyoming); historical use as scientific research species.				
Anaxyrus fowleri	4.553204971	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Analog for many other toad species (i.e., Wyoming); Reintroduction successful into NYC in 2008; historical use as scientific research species; local education species for education use.				
Rhinella marina	4.137558004	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Northern edge of native range in Southern Texas; but considered introduced into FL, HI, and rest of planet; Education - introduced exotic, large charismatic toad, giant species in Amphibia.				
Craugastor augusti	7.950855267	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Gluesenkamp - largest leptodactylid in NA, "a striking jewel in the crown of Texas herpetofauna".				
Eurycea chisholmensis	19.13456707	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Chippendale/Gluesenkamp/Chamberlain - known from (6) populations per Gluesenkamp; This Genera can also be considered so tied to its localized habitat such that they would only displace another of the same genus if introduced in other nearby areas (so reintroduction may not be warranted unless they were originally known from those springs); Dallas Zoo has them but has not had breeding success yet; Education might help with awareness (Gluesenkamp has attempted for past 3 years, but needs more help). Chippendale - this is part of the northern group from Edwards plateau. Ex situ research notes: Husbandry and natural history research with assurance colony.				
Eurycea nana	19.13456707	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes

Species	Phylogenetic significance	Biological Distinctiveness	Cultural/socio-economic importance	Scientific Importance	Education potential
	General notes: Chippendale/Gluesenkamp/Chamberlain - southern Edwards' Plateau; analog for the southern clade complex; education for flagship spring species within range (endangered plants, inverts, fish, salamanders all on university property); bred heavily at San Marcos Fed. Fish Hatchery. Ex situ research notes: Natural history data; thermal tolerances; hormonal.				
Plethodon cinereus	18.80609683	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Lots of reintroductions, but successes unknown; used heavily for local nature centers to discuss genus.				
Plethodon yonahlossee	17.74362173	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Weir/Lannoo - relatively wide-spread for an Appalachian species and adaptable to broader habitats (secondary growth forest); Chippendale - phylogenetics will split out (in progress); Also Big Bat Cave population is unusual; education - based on large size and charismatic appearance within range.				
Taricha granulosa	18.39798835	No aspect of biology known to be exceptional	No	No research dependent on this species	Yes
	General notes: Philips - have tetrodotoxin (TTD); analog for Taricha; diurnal, toxins, behaviors make good education species.				
Plethodon jordani	17.74362173	No aspect of biology known to be exceptional	Yes	No research dependent on this species	Yes
	General notes: Dodd - threats are climate change and forest change (i.e. woody adelgid, etc.); introduced into Maine unsuccessfully as part of an ecological in 1960s; iconic/flagship species for Great Smoky Mountains park (iconic - on T-shirts, mugs, key chains, etc.) and Appalachian salamanders; analog for rest of the jordani complex (isolated mountaintop) species. (Post workshop: A hobbyist in Detroit posted photos of his P. jordani that reproduced in captivity for him. Unfortunately they are quite illegal, regardless of where he obtained them. In any case, it is possible. Tim Herman, pers. comm. Oct 2013). Ex situ research notes: Climate change impacts (i.e. soil acidification from acid rain) for mountaintop species.				