

Basic Reptile, Amphibian and Invertebrate Health Checklist

Reptiles and amphibians, which are collectively known and referred to as “herps” or “herptiles” are perhaps among the fastest growing segments of the pet industry. According to the most recent American Pet Product’s Association statistics for 2015-2016, there are well over 13 million reptiles alone kept in households across the United States, and at least 4.9 million households own at least one or more types of reptiles. As their popularity continues to increase, so are the number of readily available, healthy, and well acclimated herp species each year, as well as the collective bodies of knowledge gained surrounding their biology and natural history in their natural ranges that oftentimes contribute greatly to learning and assessing their behavior, care, husbandry, and breeding in captivity as efforts to as closely replicate these factors as possible are made. However, with this surge of popularity also sometimes comes, unfortunately, unscrupulous buyers, sellers, and other sources that either may not always be up front, or do not possess the knowledge desired regarding the animal(s) they are offering. Just as with dogs, cats, and any other animals, reptiles and amphibians can become susceptible to a variety of diseases, parasites, and other disorders if they are not provided the correct care or husbandry, and as a result, oftentimes will fail to thrive, become more difficult and expensive to care for, or in some cases, ultimately end up dying or passing away.

When considering purchasing any reptile or amphibian species, especially as a new hobbyist or pet owner, it is always vital to conduct the necessary research before-hand by not only knowing and becoming familiar with the husbandry requirements of the species in question, but also the general signs of what to look for in a healthy animal as well. Unlike dogs and cats in many cases, diseases or signs of adverse health in reptiles and amphibians may oftentimes be “masked” and are not as readily obvious or apparent unless one knows what to look for. While many of these criteria can vary depending on the species, this basic checklist will attempt to provide a general breakdown of signs and symptoms to be on the lookout for when selecting a healthy animal from a quality, reputable source.

General Enclosure/Facility:

- The enclosure/enclosures are sturdy, structurally sound, secure, and otherwise escape proof with no holes, gaps large enough to enable escape, or cracks/leaks if an aquarium or aquatic setup.
- Enclosures should be adequately ventilated such that excess condensation, moisture, dampness, mold/mildew/fungal growth, and/or stagnant air/air flow is prevented.
- Substrate should be clean and well maintained. No excess or uncleaned feces, old sheddings/shed skin, urates, other bodily wastes, or uneaten, rotten, or spoiled food items (if left out in a dish or pan).
- Lighting and/or heating elements are not in direct contact or proximity to the animal for the potential to cause thermal burns or other injuries.
- Water from either water bowls, dishes, or pans, and/or water used in any aquariums or other semi aquatic to aquatic setups should be clean, free of excess debris, feces, urates, and other wastes, and/or be adequately filtrated. No excess algae or grime buildups.

- Water filtration systems for aquatic/semi aquatic setups should be sized to adequately filter the water with both mechanical and biological filtration media.
- The enclosure's glass, windows, doors, or other points of enclosure access and viewing should be kept as clean as possible, and free of stains from feces, urates, other bodily wastes, excess condensation, and mineral, or other material buildup that would impede visibility into the enclosure and reduce its aesthetics.
- The general facility in which the animals and their respective enclosures are kept should overall be clean and well kept, as well as easily accessible and navigable, and be free of excess clutter, debris, or obstructions. This includes floors, walls, ceilings, hallways/corridors, entry/exit ways, and check out/reception areas.
- Although some degree of odor may be unavoidable when keeping multiple animals, there should be no significantly or overwhelmingly bad or foul smells permeating the overall store, facility, and enclosures.
- Dry goods and other non-living products, merchandise, and supplies should be neatly organized, stacked, shelved, or arranged so as to not create excess or unnecessary clutter or obstructions.
- Products and other merchandise should also not be placed or arranged in such a way that would create potential hazards to customers and/or staff & employees (i.e. items tipping over, falling, etc).
- Any plaques, labels, or other signage attached, fastened to, or written on enclosures indicating the species by common and/or scientific name, genus, species, biology, husbandry information, or other natural history information should correctly identify and accurately correspond with the species housed or being sold within.
- Enclosures should not be visibly overcrowded and/or consist of incompatible genders of the same species (depending on the species, such as males housed together), animals of greatly disparate/differing sizes, or different species that would clearly be incompatible if housed together.
- Enclosures should generally be of adequate size, space, or dimensions according to the best available knowledge of the biology and natural history of the species to enable the animal is able to comfortably and easily move, turn around, walk, climb (if an arboreal to semi arboreal species), and/or stretch out within the enclosure.
- The enclosure should be large enough to also enable the animal(s) to comfortably be able to select their preferred thermal gradient in the enclosure without appearing dehydrated or overheated or overly cool, inactive, or lethargic.
- For snakes, enclosure should generally contain at least one square foot of space per foot of snake.
- Each species should be maintained within its Preferred Optimal Temperature zone.
- Is the store a reptile and amphibian specialty store, or are herps simply one of several departments/sections of the store?
- What, if any, supplemental reference materials are available (i.e. books, field guides, atlases, and/or care sheets, etc)? What sort of knowledge, training, and/or expertise do store employees and/or management have or are receiving?
- How is the store's overall customer service? Do employees and/or management seem knowledgeable, confident, friendly and helpful, and available/on hand for a satisfactory customer service experience?

- What sorts of products, foods, and other dry goods/supplies offer for reptiles and amphibians, and how is their product quality and selection/availability?

Feeders and Food Items

- Although some degree of odor may be unavoidable when keeping multiple animals, there should be no significantly or overwhelmingly bad or foul smells permeating the overall store, facility, and enclosures.
- Overall enclosures, bins, or other forms of housing used for any live feeders the store or facility breeds or maintains should be sturdy and well-constructed, adequately ventilated, and be clean with no excess or unkempt feces, wastes, soiled areas, dirty, foul, or otherwise unavailable water, and no excess uneaten, fouled, or rotting food within the enclosure.
- Live rodent or rabbit feeders should overall not be subject to grossly overcrowded and/or undersized enclosures or conditions inhibiting their ability to easily and comfortably move about, stand up, turn around, etc. within the enclosure.
- Any live feeders used should overall appear healthy, active, and alert/responsive in health, with no sickly or adverse conditions affecting their eyes, ears, fur/skin (if mammal feeders), mouths, noses, or overall body condition. No visible ticks, mites, or other ecto (external) parasites.
- If frozen thawed rodents and/or rabbits are available; should overall be clean and neatly organized and packaged and sealed with no excess feces, blood, odors, or other unsanitary bodily wastes or liquids.
- If live feeders (i.e. rodents or rabbits) are maintained for purposes of providing frozen/thawed feeders, should be euthanized in a fashion which is humane (such as carbon monoxide chambers).
- Any live feeding animals should not be left unattended in an enclosure with a live feeder rodent or rabbit, and/or not be fed these live items during open store/facility hours.
- Any excess dead feeder insects should be kept clean and removed from the bins and/or enclosures or from shelves or display.

Amphibians (Including Frogs, Toads, Newts, Caecilians, and Salamanders):

- Although variable depending on the species, animal should generally be active, alert, and aware of its surroundings and not limp, listless, have poor muscle tone, or be lethargic.
- Depending on the species, the animal should generally not move, jump, or behave erratically or spastically, which could indicate foul water/living conditions or toxic infections.
- Also depending on the species, animal should generally not appear bloated, thin, or bony with distinctly concave sides, or otherwise have any physical deformities that could indicate poor health, husbandry, or growth development.
- The animal's eyes should generally be clear, and not appear hazy or cloudy.
- Animal should be free of any cuts, abrasions, scrapes, sores, open wounds, abscesses, tumors, or fungal lesions or infections (particularly in aquatic amphibians).
- No skin irritation, blisters, inflammation, reddening, or other discoloration, particularly on the ventral (belly or underside) that could indicate Red Leg, or other bacterial and/or fungal infections.

- Depending on the species, skin should generally appear wet, moist, smooth, or waxy, and not desiccated or dried out unless a species' natural skin condition (i.e. many toads, and terrestrial newt species).
- The animal's feces and other wastes generally should not be runny, have red streaks, smell excessively foul, or otherwise appear abnormal in size, frequency, or color.
- Animal should be free of any visible mites, ticks, leeches, or other ecto (or external) parasites.
- Any foul odors originating from the animal and/or enclosure that is not musk or natural bodily waste should be investigated.
- For aquatic and semi aquatic species, enclosure should have sufficient water space to allow swimming, movement, and complete submersion and sufficient dry land and/or basking space appropriate for the species to emerge and bask, move, or forage completely out of the water (some newts, for example are also semi terrestrial).
- Exceptions may be given to animals currently under veterinary care or treatment for any of the above mentioned problems, but store or other source should be able to provide records of veterinary care.

Chelonians (Turtles and Tortoises):

- Although variable depending on the species, animal should generally be active, alert, and aware of its surroundings and not limp, listless, have poor muscle tone, or be lethargic.
- Beak is not overgrown, and is adequately trimmed or otherwise maintained (such in many tortoises and box turtles, for example) which often indicates improper long term diets, lighting and UV, and other vitamin or nutritional deficiencies.
- The animal's claws or nails should generally not be overgrown, and instead be adequately trimmed or worn down naturally by means provided within an enclosure. Overgrown claws or nails often indicates improper long term diets, lighting and UV, and other vitamin or nutritional deficiencies.
- Males of many aquatic to semi aquatic turtles, however, naturally have longer claws on the forelimbs than females, and is not an indication of poor health or husbandry.
- The overall health, condition, and appearance of the animal's shell (carapace, bridge, and plastron) should appear healthy according to the species in question. There should be no unshed or infected scutes or plates, scute pyramiding (where the scute becomes abnormally cone or pyramid shaped), softened and/or sloughing shells or areas or scutes of the shell, cracks, scrapes, sores, abrasions, or other abnormal shell and/or scute growth and development leading to any visible shell deformities or abnormalities (grossly asymmetrical, concave, or convex shells).
- The shell should also not have any areas of discoloration (such as black, white, red, or brown spots, patches, or lines) that could indicate shell rot or other bacterial or fungal infections and lesions.
- The animal's skin on the head, neck, limbs, and tail should also appear healthy, and free of any cuts, scrapes, sores, blisters, abrasions, open wounds, tumors, abscesses, or other discoloration that could indicate bacterial, fungal, or other infections, diseases, or disorders.
- Algal growth on the shell is natural, and does not harm the turtle, but can be cleaned or scraped off if desired.

- Ability to be able to withdraw into the animal's shell appropriately for the species. Also no outward or billowing skin or soft areas from the animal's neck, limbs, or groin regions that could indicate obesity.
- The animal's eyes and eye lids should appear clear, and not cloudy, hazy, or swollen, which can also often indicate vitamin and other husbandry deficiencies.
- Eyes, mouths, ears, anal, nasal passage ways, and overall head should generally be clear and free of any discharge, blood, discoloration, abnormal swelling, or pus ("cottage cheese" like appearance) that can potentially indicate respiratory illnesses, as well as other illnesses.
- Mucous and open mouthed breathing may also be indicative of respiratory infections or other illnesses.
- The animal's feces and other wastes generally should not be runny, have red streaks, smell excessively foul, or otherwise appear abnormal in size, frequency, or color.
- Animal should be free of any visible mites, ticks, leeches, or other ecto (or external) parasites.
- Any foul odors originating from the animal and/or enclosure that is not musk or natural bodily waste should be investigated.
- Depending on the species and their natural movements, the animal's overall stance/composure, posture, movements, and activity levels should appear well coordinated and not otherwise jerky, shaky, or erratic, which could indicate dietary, nutritional, or other health and husbandry related issues.
- For aquatic and semi aquatic species, enclosure should have sufficient water space to allow swimming, movement, and complete submersion, and sufficient dry land and/or basking space for the animal to emerge and bask completely out of the water.
- Exceptions may be given to animals currently under veterinary care or treatment for any of the above mentioned problems, but store or other source should be able to provide records of veterinary care.

Lizards:

- Although variable depending on the species, animal should generally be active, alert, and aware of its surroundings and not limp, listless, have poor muscle tone, or be lethargic. Many species should generally be tongue flicking as a means of sensing their environment around them.
- Any foul odors originating from the animal and/or enclosure that is not musk or natural bodily waste should be investigated.
- Animal should be free of any visible mites, ticks, or other ecto (or external) parasites.
- The animal does not have any old/retained sheds that, over time, restricts blood flow and can cause tissue to die, become blackened, swollen, or become necrotic or lost. Includes any skin on or along the tail/base of tail, limbs, feet, toes, or other areas of the body.
- The animal's eyes and/or eye lids should appear clear, and not cloudy, hazy, or swollen, which can also often indicate vitamin and other husbandry deficiencies.
- Eyes, mouths, ears, anal, nasal passage ways, and overall head should generally be clear and free of any discharge, blood, discoloration, abnormal swelling, or pus ("cottage cheese" like appearance) that can potentially indicate respiratory illnesses, as well as other illnesses.
- In some species, such as monitors, tegus, iguanas, and other lizards, animal's claws or nails should generally not be overgrown, and instead be adequately trimmed or worn down naturally

by means provided within an enclosure. Overgrown claws or nails often indicates improper long term diets, lighting and UV, and other vitamin or nutritional deficiencies.

- Mucous and open mouthed breathing may also be indicative of respiratory infections or other illnesses.
- The animal's feces and other wastes generally should not be runny, have red streaks, smell excessively foul, or otherwise appear abnormal in size, frequency, or color.
- The animal's overall skin and scales (including the snout) should be in overall good condition, with no damage, bloodiness, unusual sloughing, rodent bites, thermal burns, cuts, scrapes, blisters, sores, abrasions, tumors, abscesses, open wounds, discoloration, abscesses, lumps or bumps, or other lesions that could indicate a bacterial, fungal, or other infection, or mechanical trauma or injury.
- Depending on the species, the tail should be adequately fat and healthy, and not thin or "stick tailed", particularly in species that use their tails as a fat storage reserve. Tails that have been shed or lost for some reason previously by the animal and regrown or regenerated may naturally appear discolored, shorter, or otherwise different at the point of fracture, but are seldom a more significant health issue.
- Also depending on the species, the animal generally should not be overly thin, bony, or emaciated in appearance, with no overly exposed spine, rib cage, pelvic bones, sunken eyes/eye sockets, and/or noticeable skin folds that could indicate severe anorexia, dehydration, or other health and husbandry related issues.
- Depending on the species, animals should also not appear bloated, obese, or otherwise overweight, with noticeable scale spread being indicative of an unsuitable diet or other aspects.
- Limbs, feet, digits, tail, and/or overall body should not appear swollen, disfigured, or otherwise have any visible deformities indicating possible MBD (Metabolic Bone Disease), or other abnormal bone, muscular, skeletal, or growth development.
- Depending on the species and their natural movements, the animal's overall stance/composure, posture, movements, and activity levels should appear well coordinated and not otherwise jerky, shaky, or erratic, which could indicate dietary, nutritional, neurologic, or many other possible other health and husbandry related issues.
- Exceptions may be given to animals currently under veterinary care or treatment for any of the above mentioned problems, but store or other source should be able to provide records of veterinary care.

Snakes:

- Although variable depending on the species, animal should generally be active, alert, and aware of its surroundings and not limp, listless, have poor muscle tone, or be lethargic. Most species should generally be tongue flicking as a means of sensing their environment around them.
- Any foul odors originating from the animal and/or enclosure that is not musk or natural bodily waste should be investigated.
- Animal should be free of any visible mites, ticks, or other ecto (or external) parasites.
- Depending on the species and their natural movements, the animal's overall stance/composure, posture, movements, and activity levels should appear well coordinated and not otherwise jerky, shaky, or erratic, which could indicate dietary, nutritional, neurologic, or many other

possible other health and husbandry related issues. There may be genes associated with particular morphs in some species that can also cause these signs & symptoms varying in severity that are largely unavoidable, however.

- Also depending on the species, the animal generally should not be overly thin, bony, or emaciated in appearance, with no overly exposed spine, rib cage, sunken eyes/eye sockets, and/or noticeable skin folds along the body that could indicate severe anorexia, dehydration, or other health and husbandry related issues.
- There are some species (particularly arboreals) are naturally very thin and slender bodied.
- Depending on the species, animals should also not appear bloated, obese, or otherwise overweight, with noticeable scale spread being indicative of an unsuitable diet or other aspects. There are some species (such as blood pythons) that are naturally very girthy and heavy bodied.
- The animal's overall dorsal and ventral skin and scales (including the snout) should be in overall good condition, with no damage, bloodiness, unusual sloughing, cuts, scrapes, sores, blisters, abrasions, open wounds, tumors, abscesses, rodent bites, thermal burns, discoloration, abscesses, lumps or bumps, or other lesions that could indicate a bacterial, fungal, or other infection, or mechanical trauma or injury.
- Eyes, mouths, anal, nasal passage ways, and overall head should generally be clear and free of any discharge, blood, discoloration, abnormal swelling, or pus ("cottage cheese" like appearance) that can potentially indicate respiratory illnesses, as well as other illnesses.
- The row of red, linear pits or holes along the upper jaw and labial scales in most pythons and some boas, as well as visible pits between the eyes and nostrils in pit vipers are both heat sensitive pits, and are normal on these species.
- There should generally be no audible clicking or wheezing that could indicate an upper respiratory infection or other illness, although this can also be a natural vocalization in some species or the result of unevenly applied handling/pressure at various points of the body (particularly larger, heavier bodied boas, pythons, and other snakes).
- The animal does not have any old/retained sheds that, over time, restricts blood flow and can cause tissue to die, become blackened, swollen, or become necrotic or lost. Includes any skin on or along the tail/base of tail or other areas of the body.
- Eyes and eye caps should generally be clear and not hazy or opaque unless part of the animal's natural shedding cycle. There should be no stuck eye caps/buildup of previous eye caps, sunken, or dented eye caps that could indicate dehydration, inadequate temperatures/humidity, or other factors.
- Exceptions may be given to animals currently under veterinary care or treatment for any of the above mentioned problems, but store or other source should be able to provide records of veterinary care.

Invertebrates (Tarantulas, Scorpions, Other Arachnids, Crustaceans, and Insects)

- Although variable depending on the species, animal should generally be active, alert, and aware of its surroundings and not limp, listless, have poor muscle tone, or be lethargic.
- Tarantulas and many other invertebrates seldom display as many (or any) obvious or noticeable illnesses as reptiles or amphibians do until they succumb to them.

- The animal's abdomen, carapace, or cephalothorax/prosoma (consisting of the carapace, eyes, and chelicerae, or mouthparts) in scorpions, for example, and overall exoskeleton should appear to be in good condition overall and not shriveled due to dehydration or other illnesses.
- Ticks, mites, and other visible external (or ecto) parasites should not be present on the animal.
- The animal's overall movements should not appear sporadic, uncontrolled, or uncoordinated.
- Depending on the species, however, some species are naturally generally faster or slower moving.
- For tarantulas, bald spots on the abdomen can indicate that the animal recently used its urticating hairs in defense (which is not a serious concern as the hairs will regrow), or less commonly indicate a bacterial or other infection. Any baldness or hair loss not attributed to defense should be investigated.
- Legs or limbs should not appear to be missing, damaged, or deformed, although this can often be remedied over time when the animal molts and new limbs are regenerated.
- Exceptions may be given to animals currently under veterinary care or treatment for any of the above mentioned problems, but store or other source should be able to provide records of veterinary care.