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Land snailsOverviewHelicidae is a family of air-breathing land snails, terrestrial pulmonate gastropod mollusks in the superfamily Helicoidea. These snails are widely recognized for their often coiled shells and are some of the most familiar of all terrestrial mollusks.TaxonomyKingdom : AnimaliaPhylum : MolluscaClass : GastropodaSuperfamily : HelicoideaFamily : HelicidaeKey CharacteristicsShell : Most have coiled, often spherical to a slightly flattened shell.Size : Size varies significantly depending on the species.Body : Soft, muscular body capable of retracting into the shell.Respiration : Air-breathing through a lung-like pallial cavity.Tentacles : Two pairs, with the upper pair bearing eyes.Life CycleReproduction : Hermaphroditic, possessing both male and female reproductive organs, but generally engage in cross-fertilization.Eggs : Lay clusters of eggs in moist soil.Development : Eggs hatch into tiny juvenile snails that closely resemble adults.Lifespan : Ranges from a couple of years to over a decade depending on the species and environmental conditions.Behavior and EcologyHabitat : Found in a variety of terrestrial environments including forests, grasslands, gardens, and sometimes urban areas.Diet : Primarily herbivorous, feeding on a variety of plant materials, fungi, and decaying organic matter.Behavior : Generally slow-moving and often nocturnal to avoid daytime predators and desiccation.Notable SpeciesHelix pomatia : Known as the Roman snail or Burgundy snail, considered a delicacy in European cuisine.Helix aspersa : Known as the garden snail, common in gardens and agricultural areas, and also used in escargot.ConservationWhile many species within Helicidae are not currently considered at risk, habitat destruction and the use of pesticides can threaten local populations. Conservation efforts focus on habitat preservation and sustainable land-use practices.Significance to HumansHelicidae snails, especially species like Helix pomatia and Helix aspersa, are significant as a food source (escargot). They also play important roles in their ecosystems as decomposers. In some areas, they are considered pests due to their feeding on crops and garden plants.Fun FactsSleep : Some land snails can hibernate for extended periods to survive unfavorable conditions.Mucus : Their mucus has been studied for various potential medicinal properties.Reproduction : Known for their "love darts" used during mating, which facilitate sperm transfer.Size Variation : While some species can be quite small, others like the Roman snail can reach impressive sizes.Subscribe to the newsletterHelix aspersa Muller, commonly known as the Garden snail, the Brown Garden snail, or the Brown grape snail, is the species of land snail most used as a food resource and as a component of dermatological substances (cosmetic creams).Garden snails have become extremely popular due to their high prolificacy and ability to adapt to temperate climates, presenting a varied polymorphism in its shell: shape, size, color, and thickness of its shell.If you are thinking of breeding Helix aspersa, or simply want to learn more about these land snails, you have come to the right place. In this guide, I gathered everything that is currently known about Garden snails, how to care for them even in small tank setups.Quick Notes aboutGarden SnailNameGarden snailOther NamesBrown garden snail, Brown grape snail, The Gray Garden snail, Small Gray snail, Petit gris or la ZigrinataScientific NameHelix aspersa Mller TypeTerrestrial Tank size (minimum)anyKeepingEasyBreedingEasySize1.2 1.4 inches (3 3.5 cm)Optimal Temperature60 74F (15 to 24 C)Optimal Humidity70 90%SubstrateDeep enough to buryDietHerbivore / detritivoreTemperamentPeacefulLife spanup to 5 yearsColor FormBrown to grayInteresting fact: According to the study, snail mucus is composed of bioactive compounds that have different biological properties for the treatment of some skin problems. Therefore, slime from the Helix aspersa is used in many pharmaceutical and cosmetic products.Distributionof Garden SnailHelix aspersa Muller was described in 1774 by the Danish naturalist Otto Friedrich Mller, based on specimens found in Italy.This snail species is considered to be native to the French and Spanish coasts of the Mediterranean Sea. Nowadays, these little snails are present almost all over the world due to intentional distribution as an edible delicacy and accidentally with vegetables and fruits that were imported from the Mediterranean countries.Note: Helix aspersa Muller is the most popular snail species on the market. It takes around 70% of the world market.Description of Garden SnailHelix aspersa Muller is the terrestrial gastropod mollusk.This is a relatively small snail. In the adult phase, its size ranges from 2 4 cm (0.8 1.2 inches) with an average diameter of about 1.2 1.4 inches (3 3.5 cm) for a weight of about 0.5 0.6 oz (15 17 g).The shell has 4 5 flattened whorls and may acquire a grey hue.Interesting fact: Generally, these snails almost do not grow when they start reproducing and after the development of a thickened lip at the shell aperture, the so-called peristome.Lifespan of Garden SnailUnder optimal conditions and proper care, the average estimated longevity of Helix aspersa is between 2 and 5 years.Typical Behavior of Garden SnailThese snails are absolutely non-aggressive and docile by nature. Garden snails have only their operculum and shell for protection from aggressors.They live in a colonial culture and can be considered social.Helix aspersa isa highly nocturnal species. Generally, these snails emerge from their hiding places to rehydrate and forage after dark and are capable of substantial active movements.Once they had fed, snails returned to the resting area, repeating this routine several times during the night.This nocturnal behavior is very common for grazing invertebrates and is mainly associated with attempting to avoid visual predators whilst feeding.These land snails are classified assecondary burrowers. It means that they do not rely on burrows and do not spend all of their time there.However, if the environment is not optimal (for example, if the temperature drops below the comfort range), Garden snails can burrow and fall into hibernation. When Garden snails burrow, they do not move under the substrate.Features:Social:YesActive:YesPeaceful:YesBurrowers:YesDiet of Garden SnailHelix aspersa has traditionally been regarded as generalist herbivores taking a wide variety of plants from the environment. This species is capable of eating a wide variety of living and dead plants and of adjusting its diet to the availability of food items.Nonetheless, according to multiple studies, Garden snails also showed different levels of preference for the different components of their diet.For example, in observations of snails feeding upon 24 plant species, the most frequent foods in the diet of Helix aspersa were:Fragaria vesca (17.28%),Gramineae (15.96%),Trifolium angustifolium (12.24%),Hieracium pilosella (10.2%),Eryngium campestre (7.32%) andCarlina corymbosa (7.2%).Does it mean that these 6 plants are the only food they will eat? No, it does not. The diversity of the snails diet also showed seasonal variation with the maximum in the autumn months.In captivity, Helix aspersa is often fed on leaves of various cereals, vegetables and fruits such as:lettuce leaves,cabbage,cucumbers (one of the most favorite snail food),carrots,bamboo twigs,onions,fruits and leaves of apple,apricot,artichoke,barley,beans,cloves,cauliflower,celery,celery root,clover,dandelion,hibiscus,lily,magnolia,mulberry,nasturtium,nettle,oat grains,parsley,peach,ripe pears,petunias,plums, potatoes (raw and cooked),pumpkin,radishes,sorrel,spinach,wheat, etc.Note: Feeding Garden snails with organic supplies implies an increase significant in labor costs, caused by the food supply, removal of waste, and constant cleaning. Important: Like all other species of snails, Helix aspersa love to eat calcium-rich food.Calcium plays a huge role in snails. Calcium is needed for several vital life processes in snails, the most obvious being the formation of shells. The shell of a garden snail is basically made of calcium carbonate.Therefore, supplementing them with calcium is a necessity if you want them to be happy and healthy.Calcium can be found incuttlebones,eggshells,naturalchalkwonder shells,oyster shells,kale,broccoli,spinach,etc.Note: Be careful with mineral stones. They can have salt, so check the ingredients, if it is possible.For better and faster consumption, you need to ground them to dust and use them as supplements during feeding. Calcium should not contain harmful substances to harm snails. Tip: Mix calcium with wet bran or mash potatoes. This will prevent it from rotting on contact with the ground.Foods to AvoidDo not ever give Helix aspersa:acidic,salty,spicy,fried,smoked,sweets (like candy),flour (including bread).Snails also avoid plants that release chemicals or have protective hairs on the stem, etc.Note: According to the study, Garden snails are able to detect concentrations of Zn in the diet and reduce their food intake if contamination is too high.Rules of Diet in Captivity forGarden SnailsSnails usually prefer juicy leaves and vegetables to dry ones.Fruits are often perishable products that go into rot quickly. To prevent contamination, leftover feed should be removed at least weekly.The recommended diet: 20% wheat bran and 80% fruit and plant material.Snailsneed diversity in food.Do not give them the same food all the time. Change their diet periodically.Snails should always have food at their disposal, especially, young ones. They need a lot of food to grow. Without food, they will lose more than a third of their weight before they starve to death. Generally, it takes 8 to 12 weeks. However, in the hibernated state they can survive without food for almost a year.Snails should always have water. Depending on the temperature, without daily rehydration, they will lose 10-15% of their mass in 2-3 days.Calcium must be added at least once a week. Especially, if it is not available in sufficient quantities in the soil. You can also read my article:Feeding Guide for African Giant Land SnailsKeepingand HousingGarden SnailHelix aspersa is an adaptable species and can thrive in many situations. At the same time, their soft tissues are also highly susceptible to any kind of contamination because their skin has the capability to bio-accumulate metal contaminants.Therefore, to successfully breed these terrestrial gastropods we still need to address their core needs. Here are some care guidelines to help you out.Enclosure Type (Tank Size)Enclosure type will depend on how many snails and where you are going to keep and breed Helix aspersa.For example, you can easily start with the rearing plastic boxes as small as 8x8x4 inches (20x20x10 cm) for up to 20 snails. The boxes should be translucent (not transparent) to avoid too much light.Note: Snails growth becomes better rearing in opaque rather than transparent containers in a long-day photoperiod.In mass production, these boxes are often placed on a 2 mm gauge fiber glass mesh on top of 5 mm galvanized steel slatted shelves to facilitate ventilation.Note: In nature, 20-30 garden snails can be easily found per 10 square feet (1 square meter). At the same time, keep in mind that, according to the studies, when reared at high densities, young Garden snailsfeed less, show less shell growth, and have increased mortality. It is suggested that these effects are linked to reduced activity. Juveniles show reduced activity in the presence of adults or their mucus.Important: Ideally, the boxes should be cleaned daily to avoid the negative effects of excreta, mucus, and high population density.Keeping Garden Snail in Open AreasAnother way to keep Garden snails is to keep them in open areas. Of course, it can be done only if environmental conditions allow it.Many snail breeders use wooden pallets for that. Wooden pallets provide a lot of surface area for food and protection from the sun.Tip: Helix aspersa prefer pine wooden pallets over any other type.How can we keep snails in one place?This is one of the main problems when keeping garden snails in open areas. There are several ways to do that:Put some salt into a special furrow along the edges (or use bandages soaked in salt) or around the perimeter.Use an electric fence to contain them. 4-12 volts will be more than enough. The wires should be spaced 2-4 mm apart so the snail will touch them at the same time. Each wire carries an opposite charge (+ and -). Bend the top of the fences inward in half a circle to limit the movement of Garden snails.Snails do not like copper. Use a copper strip at the top of the fence.Substrate:Garden snails prefer limestone or calcareous soils to facilitate the supply of calcium which they use for the formation and hardening of the shell. If you have any doubt, add some limestone to the ground. Calcium can be added to the soil in amounts up to 10 pounds per 100 square feet.The acidity of the soil is extremely important as well. Ideally, the soil should have a neutral acidity (pH 7).Note: If the soil is too acidic, you can neutralize it with lime to make it suitable.The soil should not have too much sand or too much clay. The point is that Garden snails are not strong enough to dig hard and dry clay whereas sand cannot maintain enough moisture for a long time.It will be great if your soil contains 20-40% organic. Basically, the soil should be similar to a garden soil.The parent snail digs a nest in the soil ranging from 1-3 inches in depth to deposit its eggs. Therefore, the substrate depth should be appropriate for that.Temperature:The optimal temperature range for Helix aspersa isbetween 60 74F (15 to 24 C).Lower temperatures will decrease the activity of the snails. If the temperature drops below 43F (or 6C), Garden snails fall into hibernation.Helix aspersa is freezing intolerant. These snails can briefly survive some ice formation in their body. Nonetheless, eventually, if the temperature drops below 32 F (0 C) death occurs by freezing the tissues.Important: Recent studies proved that for Garden snails freezing tolerance abilities also vary converse with size.Indoor hibernation of adult snails can be done only in a controlled environment. Breeders ofHelix aspersa set temperature range between 3643F (26C) and humidity around 7080%. Such conditions allow at least 80% of snails successfully survive winter.The snails easily hibernated for 100110days.Humidity:Helix aspersa is used to live inhigh-humidityenvironmentsand should not be kept in dry enclosures.Garden snails develop optimally in a humid subtropical climate.The snails maintain a constant balance between the water content in their tissues and environmental humidity. being necessary for their correct development at a level of 80% to 90%, enough to keep the snails skin moist. Levels bothDepending on the daytime, the humidity level should be between 70-90%. This level of humidity will be ideal to keep the snails skin moist.Important: Besides temperature decrease and photoperiod diminishing, low humidity is another important factor that triggers land snail dormancy.The relative humidity in the rearing boxes can be regulated by spraying them with water twice daily (at the beginning of both the active and resting phases).This allowed the establishment of 2 activity periods:daytime (resting) with 70% relative humidity, andnocturnal (active) with close to 90% relative humidity.Water:Garden snails need water.As I have already said earlier, spraying them with water twice daily will keep the humidity level and provide enough water to keep them healthy.Without water, snails will lose up to 15% of their total mass in 3 days.Water is especially important if you give snails dry food.Important: If you are using bowls, do not add too much or they can drown.Lighting:On the one hand, Garden snails are nocturnal animals and avoid light. On the other hand, light greatly influences their vital and reproductive activity.According to the study, the absence of light inhibited egg-laying. Following inhibition of oviposition, the albumen gland atrophied, indicating the storage of secretory products.Therefore, Helix aspersa should receive around 12-18 hours of indirect light per day and 6-12 hours of darkness at night.Hiding Spots:Garden snails need a lot of hiding places to be happy. A LOT! Seriously, it is absolutely crucial to minimize stress to yoursnailsby giving them a lot of places tohide.The more hiding places you have the more active they become. The point is that when they do not have enough hiding places they feel less secure. As a result, they are more likely to spend more time hiding.Wooden pallets, PVC pipes, pieces of bark, driftwood, wood, stones, etc. provide shelter and hiding places.Breeding Garden SnailHelix aspersa is a protandrous hermaphrodite. It means that they can switch between functional male and functional female. Therefore, they absolutely need copulation for the fertilization of the eggs. Garden snails become sexually mature when they are around 10g. of total weight (6 10 months old). Sexual maturity is based on judging whether the peristome (edge of the aperture of the shell) is reflected.Mating:Preliminary maneuvering averages around 30 minutes. The copulation time is about 6-8 hours.The 2 snails position themselves head to tail to exchange their spermatophore.Each snail transfers a spermatophore into the partners bursa tract diverticulum and travels up to the fertilization pouch-spermatheca complex where they are stored in blind-ended spermathecal tubules.Interesting facts:Spermatophores can be stored for up to 4 years.In Helix aspersa, snails possess love darts and shoot them during the final stage ofObservations indicate, that the receipt of a dart has only a small behavioral effect on sexual arousal. Scientists suggested that the dart serves as a basis for mate choice either as a nuptial gift of calcium or as an indicator of the shooters innate quality. Even though thefirst hypothesis has been tested and rejected, the second remains a viable possibilityIncubation:Fertilization happens in the fertilization chamber. Generally, it takes around 2-3 weeks from copulation to oviposition.Eggs:The eggs are deposited at a rate of one per 11 minutes. Weight losses following oviposition are roughly proportional to the number of eggs deposited, and weight recovery takes from 19 to 23 hours.On average, Helix aspersa can have around 130 eggs (from 80 to 180), each with 0.6 mg of calcium in the form of calcite crystals. To lay eggs, Garden snail digs a cavity 1 inch (2-4 cm) wide with its head deep in the ground.Egg-laying can last up to 36 hours.Depending on the temperature and light (they need at least 8 hours of light), Helix aspersa can lay eggs every month.Note: In breeding facilities, the egg batches are transferred and hatched on trays containing an organic substrate (a commercial mixture of fibrous peat and pine tree bark compost). This way it will help to maintain humidity.Hatching:Egg hatching depends on the temperature. For example, at 68F (20C) it takes 21 days. The survival rate is pretty high and reaches almost 90%.Newly hatched garden snails weigh from 0.02 to 0.03 gr. After hatching, baby snails remain in their nest for the next 2-4 days.Garden Snail and Suitable TankmatesNatural enemies of Helix aspersa:rats,mouse,birds,frogs,skunks,weasels,lizards,some beetles,centipedes,land crabs,predatory snails (such as Strangesta capillacea or Rosy Wolfsnail (Euglandina rosea)).Ideally, Garden snails should not be kept with other animals.In ConclusionHelix aspersa has a high degree of adaptability to various climates. In addition, these snails reach sexual maturity at 6 months of age, adequate time for marketing. Thanks to these properties, on farms, Garden snails have become the most popular in breeding.References:Iglesias, J., and J. J. M. S. Castillejo. Field observations on feeding of the land snail Helix aspersa Muller. Journal of Molluscan Studies 65, no. 4 (1999): 411-423.Laskowski, Ryszard, and Stephen P. Hopkin. Effect of Zn, Cu, Pb, and Cd on fitness in snails (Helix aspersa). 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The shell of this species has a height of about 0-9-1.3 Inches, and a width of 0.9-1.5 inches and a lip appears at its edge when an individual is old.It is a small mollusk, with a shell that has a sphere shape and a slightly rough surface, with about 4 or 5 spirals. Not all individuals have the shell of the same color; some have it dark brown, but the majority has it light brown or with a golden hue; also, it shows several brown or yellow stripes. This shell has a large opening whose edges are white.This mollusk has a soft body protected by the shell, but when it is not feeding or when it feels danger, it retracts to its shell.The garden snail has a flat muscular foot that helps it move with a gliding motion aided by the release of mucus to reduce the friction with the surface. This mucus is the reason of the trace that snails leave when they move around.Garden Snail or Helix aspersaDistribution and habitatIt is a snail native to the Mediterranean region but now is in many more areas of the world, which makes it a species of wide distribution and presence on all continents, except Antarctica. Individuals of Helix aspersa dwell in the lowlands of Great Britain, in the Mediterranean, in Western Europe, in North Africa including Egypt, in the Iberian Peninsula and the Middle East, including Turkey.However, these snails now dwell in several places where they are agricultural pests. Taken to the United States long ago, it has prospered in some regions. It also inhabits after being introduced in Australia, New Zealand, Haiti, Mexico, Chile, Argentina, South Africa and some islands in the Atlantic Ocean. This species arrived at these places either accidentally hidden in plants or vegetable shipments or intentionally introduced for some purpose.It dwells peacefully in places of temperate climate, either inhabited or not by humans. It usually lives in forests, meadows, hedges, farmland, gardens and parks.FeedingThe species is herbivorous and consumes many types of plant matter. It finds its food in fruit trees, herbs, cereals, flowers and bark of trees, but occasionally it adds to its diet organic matter in decomposition, either vegetable or animal.Because it frequents crops for food, it is often considered an undesirable pest.The garden snail mouth is beneath its tentacles, and it has a toothed ribbon called the radula, which is used to fragment its food. This structure is exclusive of mollusks, and most of them have one.BehaviorThe garden snail is a terrestrial species with nocturnal habits; it does most of its day-to-day activities at night or very early in the morning, but if it rains during the day, it usually goes out.In hot or drought periods, Helix aspersa retracts in its shell and covers the opening with a layer of mucus called epiphragm, which helps to keep the moisture inside and avoid the attack of animals that can kill it, like some ants. After doing this, it enters a state of inactivity that compares to hibernation. But not all snails hibernate. For example, in Southern California, young individuals are often active throughout the year.Some of these snails hibernate during winter months, especially when they are mature, but they return to activity with the spring.They are extremely slow as their fastest speed is only 1.3 centimeters per second.Close up to garden snail on green backgroundReproductionLike other gastropod mollusks, the Helix aspersa is hermaphrodite, since a single snail has male and female reproductive organs and therefore, can produce reproductive cells of both genders. However, they usually mate with another snail for fertilization; even tough self-fertilization is possible for this species.A garden snail reaches sexual maturity between its first and second year of life and the breeding season is at the beginning of summer. In the short process of courtship, male and female touch each other and then each inserts the other a mucus-covered calcium structure, known as the love dart, which could help to survive spermatozoa. Then both insert their penis into their partner, and the sperm is transferred and stored until the eggs are mature and ready to be fertilized. The entire mating process requires 4 to 12 hours.During the mating process, they fertilize each other, and they both will lay around 80-86 eggs about 3 to 6 days after the copulation. Each snail will create a nest digging a hole in the soil with its foot to deliver its eggs. After excavating about 1 to 1.5 inches, they drop the eggs in the nest. Hatching occurs two weeks later if it is summer.Gardens snails can produce up to six batches of eggs in a single year, and each newborn will take one to two years to mature.PredatorsGarden snails are a food source for some animals like lizards, frogs, and worms. Predatory insects and other species of snails will also eat garden snails.Some birds, especially ducks will feed on these snails.Relation with humansThis species is edible, and it is sometimes used for cooking, although it should not be confused with the helix pomatia, the Escargot.Although it is considered a pest in most places, it has acquired popularity in the cosmetic industry because of the regenerative properties of their mucus.Threats and conservationThe garden snail is not threatened, but given that it is considered a pest, humans try to kill them to avoid losses in crops. In contrast, this snail is edible, and in some countries like France and Spain, they catch them for food.Garden Snail Infographic!(Click for expand)Sources: //entnemdept.ufl.edu/creatures/misc/gastro/brown_garden_snail.htm //en.wikipedia.org/wiki/Helix_aspersaBioExpedition Publishing 2017. Share copy and redistribute the material in any medium or format for any purpose, even commercially. 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For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. Helix is a genus of large air-breathing land snails, terrestrial pulmonate gastropod molluscs. This genus is native to Europe and the regions around the Mediterranean Sea. Helix is the type genus of the family Helicidae.The best-known species include Helix aspersa, the common, or brown garden snail, and Helix pomatia, the Roman snail, Burgundy snail, or edible snail. H. pomatia and some other species are eaten as escargots.Helix snails have been introduced throughout the world, where some, especially H. aspersa, have become garden pests.The genus Helix is known from the Oligocene on.[2]Snails in this genus create and use love darts during mating. [edit] Species[]Subgenera and species within the genus Helix include today:Subgenus Helix Subgenus PelasgaHelix pomacella Mousson, 1854Helix figulina Rossmssler, 1839Subgenus CornuHelix aspersa Mller, 1774 - brown garden snail or common garden snail also known as Cantareus aspersus and Cornu aspersusSubgenus?Helix aperta Born, 1778Helix engaddensis Bourguinat, 1852 - Levantine field snailHelix buchi Dubois de Montpreux, 1839 (largest species of the genus Helix, a synonym[3] is Helix goderdziana Mumladze, Tarkhnishvili & Pokryszko, 2008[4]).Helix godetiana[5] Helix insignis - late MioceneHelix lutescens Rossmssler, 1837Helix mazzullii - also known as Cantareus mazzulliiHelix melanostoma Draparnaud, 1801Helix obruta Morelet, 1860[6]Helix texta Mousson, 1861[7]Some taxonomists remove the species "Helix aperta", "Helix aspersa", and "Helix mazzullii" from the genus Helix and place them in their own monotypic genera as Cantareus apertus, Cornu aspersum[8] and Cantareus mazzullii.At the beginning in the mid-1700s the generic name Helix had been used for almost all terrestrial gastropods, later this was restricted to species with helicoid habitus, including zonitids and other groups. In the course of the 1800s more groups were removed, but prior to 1900 several thousand helicid and hygromiid species of Europe and abroad had still been classified in the genus Helix.[9][10] It was only in the early 1900s that the genus was split up into many separate genera, leaving only some 30 species closely related to its type species Helix pomatia in the genus Helix.[edit] External features[][1][2]An unidentified Helix species from southern EuropeIn addition to the hard calcareous shell that covers and protects the internal organs, the head and foot region can be observed when the snails are fully extended. When they are active, the organs such as the lung, heart, kidney and intestines remain inside the shell; only the head and foot emerge.The head of the snail has two pairs of tentacles: the upper and larger pair contain the eyes, and the lower pair are used to feel the ground in front. The mouth is located just underneath the head. The tentacles can be withdrawn or extended depending on the situation. The mouth has a tongue called a "radula" that is composed of many fine chitinous teeth. This serves for rasping and cutting food.[edit] Behaviour[]From April through the northern summer, the number of snails copulating increases due to the higher temperature and humidity, which enhance the possibility of oviposition. The pulmonate snails are hermaphroditic, meaning that both female and male sexual organs are present in the same individual. The snails produce both eggs and sperm in the ovotestis (also called the hermaphrodite gland), but it is later separated into two divisions, a sperm duct and oviduct, respectively.Mating takes several hours, sometimes a day. H. aspersa snails stab a calcite spine, known as a "love dart", at their partner. The love dart is coated with a mucus that contains a chemical that enables more than twice as many sperm to survive inside the recipient. A few days after mating, the eggs are laid in the soil. The eggs are usually 46 mm in diameter.After snails hatch from the egg, they mature in one or more years, depending on where the organism lives. Maturity takes two years in Southern California, while it takes only ten months in South Africa.The size of the adult snails slightly varies with species. H. aspersa grows up to 35 mm in height and width, whereas H. pomatia grows up to 45 mm. The life span of snails in the wild is on average two or three years.Some snails may live longer, perhaps even 30 years or older in the case of the Roman snail[11] but most live less than 8 years. Many deaths are due to predators and parasites.The garden snail is a relatively fast snail. It has been observed to reach speeds of up to 1.3 cm/s.[12][edit] Respiration[][3][4]Burgundy Snail (Helix pomatia)Since snails in the genus Helix are terrestrial rather than fresh-water or marine, they have developed a simple lung for respiration. (Most other snails and gastropods have gills,instead.)Oxygen is carried by the blood pigment hemocyanin. Both oxygen and carbon dioxide diffuse in and out of blood through the capillaries. A muscular valve regulates the process of opening and closing the entrance of the lung. When the valve opens, the air can either leave or come into the lung. The valve plays an important role in reducing water loss and preventing drowning.[edit] Ecology[]Helix snails prefer cool, damp environments, as they easily suffer moisture loss. Snails are most active at night and after rainfall. During unfavourable conditions, a snail will remain inside its shell, usually under rocks or other hiding places, to avoid being discovered by predators. In dry climates snails will naturally congregate near water sources, including artificial sources such as waste-water outlets of air conditioners.The common garden snail (Helix aspersa) is herbivorous. These snails are able to digest most vegetation including carrots and lettuce. They also have a specialized crop of symbiotic bacteria that aid in their digestion, especially with the breakdown of the polysaccharide cellulose into simple sugars.Many predators, both specialist and generalist, feed on snails. Some animals, such as the song thrush, break the shell of the snail by hammering it against a hard object, such as stone, in order to expose its edible insides. Other predators, such as some species of frogs, circumvent the need to break snail shells by simply swallowing the snail whole, shell and all.Some carnivorous species of snails, such as the decollate snail and the rosy wolf snail, also prey on Helix snails. Such carnivorous snails are commercially grown and sold in order to combat pest snail species. Many of these also escape into the wild, where they prey on indigenous snails, such as the Cuban land snails of the genus Polymita, and the indigenous snails of Hawaii.[edit] Edible snails[]See also: Snail#Human use: land snails as foodH. pomatia and H. aspersa are the two edible species that are most used in European cuisine. Spanish cuisine also uses Otala punctata, Theba pisana and Iberus gualterianus alonensis, amongst others. The process of snail farming is called heliciculture.Escargots are often served in a traditional way as appetizers. They may also be used as ingredients in other recipes.Snails contain many nutrients. They are rich in calcium and also contain vitamin B1 and E. They contain various essential amino acids, and are low in calories and fat. Share copy and redistribute the material in any medium or format for any purpose, even commercially. Adapt remix, transform, and build upon the material for any purpose, even commercially. 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Need some help to solve your crosswords ? crosswords in English Also available in English,French,Spanish,Italien. View source Welcome to Snailipedia Sea Snails ~ Land SnailsThe Snail Encyclopaedia,StaffSnailman and November Klause (defunct) Snail Wiki is a collaborative Snail Encyclopedia. So if you see a snail, you can see what it is. Yeah, I know. You're brain is slimy. But, it will be more slimy when you're here. Did you know?Snails are genderless. They have both reproductive organs. It just depends on whos luring who. When they mate. They use love darts, not spray.Snails don't live in their shell, What's inside their shell? Their internal organs are in their shell.Snails have 5 "sticks" they are the 2 eyes, the 2 nostrils and 1 "male part".Learn something every day...User of the MonthThe user of the month is Zourough. This dude help out alot. Thnx bro.Photographer's Pick, Featured Photo of the Month Celebrating the old logo's work The Old Logo was the one that served from 2012 to now. The logo was thought of as offencive by me and Zourough because the hidden swastikas on it. It was a funny easter egg but many Jews would be "offended". Plus, it was made in poor quality. Anyways, instead of bashing it, let's celebrate it and have a memorable regongnition of it's creativity and it's time of being the notable logo of Snailipedia.Become Admin?Read our policy before you contact the nearest admin. The family Helicidae consists of shells that are usually flattened or depressed conical, with some species having globular or cylindrical shells. The shells in certain genera, such as Cepaea, are brightly colored and patterned. Helicidae have distinct anatomical characteristics, including a ribbed jaw and specific reproductive structures. The number of haploid chromosomes in this family ranges from 22 to 30. Helicids are primarily distributed from the Caucasus through Europe to North Africa, but some species are found on islands like Cape Verde and the Canary Islands. Additionally, some helicids have been introduced and established in various locations worldwide. The family Helicidae is further categorized into three subfamilies based on molecular phylogenetic analysis.HierarchyRoman Snailspeciesof familyHelix SnailsShell descriptionThe shells are usually flattened or depressed conical. Globular shells are found in the genera Helix, Maltzanella, Lindholmia, Cornu, Cantareus, Eremina, and Idiomella. One species, Cylindrus obtusus, has a cylindrical shell. In some genera, especially in Cepaea, the shells are brightly colored and patterned.AnatomyHelicidae typically have a ribbed jaw, bursa copulatrix with a diverticulum, and one dart sac accompanied by a pair of (usually) branched, tubular mucous glands inserting at the base of the dart sac.GeneticsIn this family, the number of haploid chromosomes lies between 22 and 30.In the Darwin Tree of Life." project, four species (Cepaea nemoralis, Cepaea hortensis, Cornu aspersum, and Arianta arbustorum) are scheduled for whole genome sequencing and assembly (Data portal.).DistributionThe core of helicids is distributed in from the Caucasus through Turkey and Europe to North Africa. However, some genera or species live beyond these limits. Helicids occur on Cape Verde (Eremina), Canary Islands (Theba, Hemicycla) and the Madeira Archipelago (Lampadia, Idiomela). Levantina extends far south in western Arabia, and Eremina desertella is distributed as south as Sudan, Eritrea and Puntland in Somalia. Cepaea hortensis lives on Iceland and in a small area in eastern Canada. Some species, notably Cornu aspersum and Theba pisana have been introduced and become established in numerous different areas worldwide.TaxonomyThe family Helicidae contains 3 subfamilies (according to molecular phylogenetic analyses):References== External links ==Ancestry Graph%%{init: {'theme': 'base','themeVariables': {'primaryColor': '#83a09c','primaryTextColor': '#212d2b','primaryBorderColor': '#fff','lineColor': '#fff','secondaryColor': '#006100','tertiaryColor': '#fff'}}}%%flowchart LRclassDef active fill:#fffgastropods("class: Gastropods"):::activegastropods-->pulmonata(": Pulmonata"):::activepulmonata-.->bush-snail(["species: Bush snail"])pulmonata==>helix-snails("family: Helix Snails"):::activepulmonata-.->roundback-slugs("family: Roundback Slugs")click bush-snail href "/en/catalogue/gastropods/pulmonata/bush-snail/"click helix-snails href "/en/catalogue/gastropods/pulmonata/helix-snails/"click roundback-slugs href "/en/catalogue/gastropods/pulmonata/roundback-slugs/"click gastropods href ""click pulmonata href "/en/catalogue/gastropods/pulmonata/"Helix Snails on wikipedia.orgHelix Snails on iNaturalist.orgCopyright

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