



The 4-H Pocket Pets Project: AN INTRODUCTION

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Table of Contents

Introduction	1
Selecting an Animal.....	1
Housing and Care.....	1
Showing	2
Amphibians/Reptiles	
The Basics.....	3
Frogs	4
Lizards.....	4
Salamanders	5
Snakes.....	6
Turtles	7
Birds	
The Basics.....	8
Canaries	8
Cockatiels	9
Cockatoos.....	10
Finches	10
Mynahs.....	11
Parakeets.....	11
Parrots.....	12
Fish	
The Basics.....	13
Freshwater	14
Tropical	14
Saltwater.....	15
Mammals	
The Basics.....	16
Cavies (Guinea Pigs)	16
Chinchillas	17
Ferrets	18
Gerbils.....	19
Hamsters	20
Hedgehogs	21
Mice and Rats	21

Other Animals

The Basics..... 22
Ants..... 22
Crickets 23
Hermit Crabs..... 23
Spiders..... 24
Crossword Puzzle 25
Crossword Puzzle with Hints..... 26



Introduction

As the United States continues its shift from a rural population to an urban or suburban population, a corresponding shift in the type of animals youths see and develop an interest in is also occurring. Currently, youths have a much greater chance of seeing and having an interest in animals previously considered highly unusual and somewhat rare. The purpose of this publication is to provide insight and information into the basic needs of these animals now known as “pocket pets”.

Selecting an Animal

Selecting an animal for a pet is a personal process. It is based on individual preferences, experiences, and desires. This selection process must also take into account the abilities of the person (such as time, patience, expectations, etc.) and the needs of the animal (such as housing, space, environment, etc.). If the abilities of the person and/or the needs of the animal are not considered, a very unhappy and unrewarding situation is likely to occur. Therefore, it is important for prospective pet owners to understand their personal abilities and to research the needs of each type of animal they are considering as a pet. The more the abilities of the person mesh with the needs of the animal, the more likely a successful and positive relationship will evolve.

Housing and Care

The housing recommendations, health requirements, and other needs of a prospective pet vary from animal to animal. It is quite easy to understand that the needs of a bird are much different than the needs of a fish, but it is also important to know there are some common practices and principles that apply to the care, feeding, and management of all animals.

- Use the correct type of feed
- Feed and water should be clean and fresh
- Proper housing must be used and maintained
- Proper temperature must be maintained
 - * The correct temperature will vary from animal to animal, but whatever is recommended for each animal should be established and maintained on a continual basis.
- Cleaning schedule must be maintained
 - * The schedule will vary from animal to animal, but regardless of the species, cleaning its home is part of its needs.
- Observe daily for signs of healthiness
 - * A healthy animal will be alert and bright eyed; have erect/correct posture (even for a fish); have bright colors and/or shiny fur; have a full chest/abdominal cavity; have clean nostrils; and breathe, eat, drink, and act normally.
 - * An unhealthy animal will have a decreased appetite and not drink as much. It will also appear listless (slow and not act normal), depressed, shrunken, dull eyed and droopy tailed, and it will probably produce a different stool than normal such as dry and hard (constipated) or watery and loose (diarrhea).
 - * If the animal appears to be sick, there are two important steps to follow: tell an adult and separate the sick animal from other animals. If a veterinarian is consulted, follow the advice carefully.
- Follow health maintenance guidelines

It is recommended to have the housing facility (fish tank, bird cage, gerbil run, etc.) and equipment (heater, lights, feeders, baths, etc.) completely setup and ready for use a day or two before an animal is expected to arrive. This allows for testing, adjustment of housing facilities and equipment, and repair or replacement of broken or nonfunctional items.

Showing

Pocket pet exhibitions are becoming more and more popular at many county fairs; however, the major purpose of these shows is not to evaluate the conformation of the animals (such as is done with market animals) but rather to evaluate the health of the animals. In pocket pet shows, the eyes, ears, fins, feathers, tails, etc. are checked for signs of illness rather than the amount and condition of muscle, fat, etc. that are evaluated in market animal shows. This is why many of the judges for pocket pet shows are veterinarians, pet store owners, pet store managers, etc.

Some pocket pet shows include a showmanship contest. Since these animals are actually pets and many species are exhibited, specific guidelines for showing and/or showmanship are difficult to outline, detail, and discuss; however, some basic principles can be applied and utilized by the exhibitor.

- If possible, the animal should be washed and groomed.
- The exhibitor should be neat, clean, and well groomed.
- Clothes worn by the exhibitor should be standard/acceptable showmanship apparel.
 - * Clean, long pants without holes
 - * Long-sleeved shirt, for safety reasons
 - * Hard shoes or boots, for safety reasons

- Follow standard/basic showmanship guidelines and procedures.
 - * If possible or needed, use proper equipment with the animal
 - * Maintain eye contact with the judge
 - * Exhibitor/animal should move with ease and control.
 - * Keep the animal between the exhibitor and the judge
 - * Keep the animal posed at all times (if possible for type of animal)
- Exhibitor should be knowledgeable about the animal.
 - * Habits of that type of animal
 - * Basic needs of that type of animal
 - * Care provided/needed for the animal
 - * Feeding provided/needed for the animal
 - * Normal body conditions for the animal, such as body temperature.

Hint: Practicing with the animal and studying about that specie will make for a more positive experience at the show.

Amphibians/Reptiles – The Basics

Amphibians and reptiles are cold-blooded, which means their body temperatures are not internally regulated like warm-blooded animals including humans. Additionally, they do not have hair, and their skin is different than ours as they tend to either have scales or skin that is very tough and hard or a skin that must be kept moist because it is sensitive to air quality and is used as part of the breathing process. For these reasons, many people do not consider these animals as pets. Yes, they may not be warm and cuddly, but they can still make wonderful pets and excellent additions to a household.



Amphibians and reptiles are located throughout the earth, and there are many kinds of these animals; however, only a few have become popular as pets. These include the frog (both aquatic and land species), lizard, salamander, snake, and turtle. It is important to note that some species can be poisonous or otherwise dangerous to humans, so selection of amphibians and reptiles as pets should be undertaken with much caution and questioning.

The owner needs to be prepared to dedicate the time, effort, and money required to provide the proper environment and comfort for the animal. Regardless of the animal selected for a pet, certain feeding and housing requirements need to be met and maintained if an animal is to maintain good health and provide enjoyment for its owner. Most amphibians prefer temperatures close to room temperature (70 to 75 degrees) and a moist environment. Reptiles tend to prefer slightly warmer temperatures (75 to 85 degrees) and a dryer environment. They both need housing that is well-ventilated, has a lid that securely closes, provides room to exercise and move about, provides a sleeping area and a feeding area, has a heat source and thermometer, provides constant access to non-chlorinated water, and has a fluorescent light to provide full-spectrum daylight. Many species also need an ultraviolet light so they can synthesize vitamin D.

Amphibians/Reptiles – Frogs

Frogs are amphibians, and there are many species that have become popular as pets. Because of the number, this manual has a general focus. Specific information on each pet species is available from books, pet stores, veterinarians, breeders, and other sources. It is recommended that one or more of these information sources be used for whatever species is being considered as a pet.

Typically, frogs have a life span of about 10 years, are shy animals, and like a place to hide so they can blend into their surroundings. They usually require a housing environment with a temperature that approximates room temperature (70 to 75 degrees) and a combination of water and land (known as a paludarium – about half aquarium and half terrarium). Since frogs are somewhat shy, the land area of the housing should contain plants that provide cover and rock formations that form small caves. An ideal water area would provide a variety of depths up to about 6 inches. In order to maintain water quality, about one-third to one-half of the water should be changed on a weekly basis. The total space needed will vary according to the number of frogs (which should be more than one, because they tend to be a social animal) and the size of the species selected as the pet. Generally, a 10 to 15 gallon aquarium will make a comfortable home for two to four frogs.

The diet of a frog consists of insects such as moths, grasshoppers, crickets, earthworms, caterpillars, and flies. If these are not available, small pieces of hamburger or other meat can be an acceptable substitute for some frogs. Regardless of what is fed, it should only be given on a twice-a-week basis, and a vitamin supplement designed for amphibians should also be provided.



Amphibians/Reptiles – Lizards

Lizards are reptiles and, like frogs, there are many species that have become popular as pets. The popular pet species include anoles, geckos, iguanas, and monitor lizards. Since there are so many popular species, this discussion will be in general terms and then be adjusted to conform to the needs of the specific species selected as the pet. Complete information on each pet species is available from books, pet stores, veterinarians, breeders, and other sources. It is recommended that one or more of these information sources be used for whatever animal species is being considered as a pet.

Many of the popular lizards have a life expectancy of 10 to 12 years, but the monitor lizard can live to be more than 50 years old. The lizards also vary in size and, therefore, so will the housing requirements – but the care basics are about the same for all species and so are many of their characteristics. Most lizards (especially smaller ones) can move very quickly and tend to hide in or under things such as rocks, crevices, leaves, or debris piles. The tails of most lizards break off rather easily, which allows for an easier escape from their enemies. This also means pet lizards should not be picked up by their tails. Regardless of how a tail is lost, most eventually grow back. Another common feature of most lizards is they have a multi-purpose tongue. They use their tongue for drinking, cleaning their mouth (especially after eating),

and for smelling, which is why the tongue is usually darting in and out of their mouth.

Housing tends to be in an aquarium of appropriate size for the selected species. Most of the lizard species selected as pets spend most of their lives on land, so most of the aquarium homes are designed as a terrarium. Since lizards tend to be somewhat shy, the design of the terrarium should include rock caves, plants for cover, sticks/twigs as “tree” substitutes, and other features that make the terrarium a comfortable home. Additionally, since some lizards live near ponds, a small area of water may be appropriate to include in the design of the terrarium. If a water area is provided, about one-third to one-half of the water should be changed on a weekly basis so good water quality is maintained. Other cleaning involves the removal of feces and other “trash” from a lizard’s home on a daily basis. A thorough cleaning must be undertaken on a weekly or bi-weekly basis – depending on the lizard species – in order to maintain a healthy and comfortable home for the lizard. Regardless of the terrarium size or the material used in the design of the terrarium, one feature that is a must for all lizard housing facilities is a cover that securely fits over the structure and cannot be removed or opened by a lizard.

The diets of most lizards consist of insects such as moths, grasshoppers, crickets, earthworms, caterpillars, and flies. The food should only be provided on a twice-a-week basis, and it should be varied so that all of the essential vitamins and minerals are obtained by the lizard. It is recommended that a vitamin and mineral supplement designed for reptiles be provided.



Amphibians/Reptiles – Salamanders

Salamanders vary in length from a few inches to several feet. The two most popular pet species (tiger and fire, which are both native to North America) normally grow up to 15 inches in length and live as long as 15 years. Since many salamanders have characteristics similar to lizards, they also have the same tail feature as lizards – meaning it serves as a survival mechanism, because it is easily removed to provide an easier escape (but, it does grow back). Therefore, salamanders should not be picked up by the tail. Due to the possibility of tail loss, handling a salamander is not recommended. Handling is also not recommended because their skin is moist, and handling tends to remove this moisture. If it becomes necessary to handle one, do so only with moist hands. After handling, wash your hands with soap and water to help prevent the spread of germs.

Salamanders are amphibians and require a moist and/or semiaquatic environment. Most housing designs for salamanders should be of the paludarium type (part land and part water). The design should incorporate items such as water and land plants, twigs, rocks, etc. About one-third to one-half of the water should be changed daily (or as needed since salamanders tend to be very messy) so that water quality is maintained. Other daily cleaning involves the removal of feces and “trash” from its home.

A thorough cleaning should occur weekly to maintain a healthy and comfortable home. Regardless of the size of the house or the material used in its design of the housing, a securely fitting cover that cannot be removed or opened by a salamander is a must.

The natural diet of salamanders varies from species to species. As pets, most will learn to eat canned cat or dog food, pieces of hamburger, or other meat. Beef or chicken liver is preferred by many species of salamander. They will also eat earthworms, crickets, flies, tubifex worms, brine shrimp, and similar species. Mature salamanders can survive quite well on twice or thrice-a-week feedings, but younger salamanders should be fed on a daily basis. This daily feeding seems to work best when it is done in conjunction with the daily exchange of water.

Amphibians/Reptiles – Snakes

There is little doubt snakes make many people uneasy. Snakes can create extreme fear because some species are dangerous or even deadly; however, the vast majority are harmless. One of the reasons people think snakes are evil is the steady flicking of their tongues, which are used to detect smells.

Non-poisonous or non-deadly snakes are one of the easiest creatures to keep as a pet. They are quiet, clean, odorless, relatively undemanding, and fairly cheap to feed and maintain. Most of the species used as pets have a life expectancy of 10 to 15 years; however, some of the bigger snakes, such as those imported from South America, can live as long as 30 years.

An important housing consideration is to allow enough space for snakes as they grow. The general recommendation for a house is that it should be slightly longer than the length of the snake and at least half as wide as the length of the snake at its mature size. If a snake is about 12 inches long, for example, the hous-



ing should be at least 15 to 18 inches long and at least 6 to 8 inches wide. A terrarium usually makes a very comfortable home for most snakes since many of the species used as pets spend their life on land. Since snakes tend to be somewhat shy, the design of the terrarium should include rock caves, plants for cover, sticks/twigs as “tree” substitutes, and similar features. Snakes do not go to the bathroom often. For some species, it is only every two weeks. Therefore, it is not necessary to clean a snake’s home on a daily basis, but it should be monitored and cleaned as needed. The water container should be cleaned daily. Make sure the lid is secure and cannot be lifted by the snake.

The natural diet of a snake varies from one species to another. Like other reptiles, snakes do not eat on a daily basis. Depending on the species, they eat once or twice a week or even as little as once every two weeks. Snakes also eat less often as they age. Regardless of the size or age of the snake, it prefers live food but can be trained to accept non-live food. All snakes are carnivores and therefore should be fed meat. Canned pet food and hamburger tend to be the food of choice for most pet snakes. The size of the portion provided will depend on the size of the snake.

Safety note: Periodically, snakes shed their skin. About a week before shedding, a snake’s eyes become cloudy. During this time, it is very important to not handle or startle the snake because it cannot see well and will have a greater tendency to bite in order to defend itself.



Amphibians/Reptiles – Turtles

Many species of turtles have become pets. There are two major categories (both in the wild and as pets): water turtles (known as terrapins) and land turtles (known as tortoises). The most important environmental factor for both types is temperature, which should be kept at approximately 80 degrees for terrapins and slightly higher for tortoises (85 to 90 degrees depending on species).

Other housing factors to consider are size (bigger turtles need more room) and the number of turtles (more turtles need more room). Housing should provide both land and water areas (this is known as a paludarium). The amount of land area compared to water will vary according to the species. Terrapins need mostly water while tortoises require more land. Regardless of the size of the water area provided, about one-third to one-half of the water should be changed on a weekly basis so that good water quality is maintained. Feces and other “trash” should be removed from a turtle’s home on a daily basis or as otherwise needed, and a thorough cleaning must be undertaken every so often (weekly, bi-weekly, monthly – depending

on the turtle species) in order to maintain a healthy and comfortable home. A paludarium should include items that approximate the native environment of a turtle. Things such as twigs, rocks, water lilies, lily pads, land plants, moss, and similar items should be contained in the housing provided for a turtle.

The diet of a turtle should consist of meat items and plant materials because many turtles are omnivores, meaning they eat both plants and meat. Turtles, like other reptiles, do not need to eat every day. Feeding them two or three times a week is very suitable. They do not have teeth, so their food should be mushy or cut into smaller pieces. They will eat chopped lettuce, pieces of fruit, cut up leafy vegetables, and other fruits or vegetables that have been properly prepared. Most turtles will eagerly eat canned cat or dog food and other pieces of meat. When feeding canned food (dog or cat), it is recommended to stir in a supplement of a vitamin/mineral mixture, bone meal, or oyster shell to make sure the turtle is getting all of the nutrients it needs. Clean and fresh water should be provided on a continual basis, and the water container should be cleaned daily.

Birds – The Basics

Birds make wonderful pets. Canaries, cockatiels, finches, macaws, parakeets, and parrots are the most common species of birds used for pets. These birds vary in size, so the species and number will determine the size of the cage needed. Roomy cages are better than smaller cages. Birds should be able to easily stretch their wings, and they should be able to have freedom of movement throughout a cage, meaning they should have to fly from one part of the cage to another. Play items such as swings and perches should be placed in the cage. Perches should be of different sizes so a bird can exercise its feet and legs.

Available space and location for cages within a house are important aspects to consider. Sudden and/or long-term temperature changes from the preferred temperature for birds (70 to 75 degrees) are harmful, so do not place the cage in a kitchen, next to a window, near a door, by a heating/air conditioning vent, under a ceiling fan, or close to a television. It is important to cover the cage at night to help the bird avoid chills or drafts and to provide a sense of security. The cover can be one that is commercially produced or something as simple as a cloth sheet or towel. Do not use a plastic cover because this could smother the bird.

A cage should be big enough to hold (without cramping the cage space) at least three feeding cups: one cup for bird feed or pellets, one cup for fruits or vegetables, and one cup for water. The cups should be cleaned daily, which is why many bird owners have two or three sets of feeding cups. Each night, dirty cups are replaced with clean ones, which helps to maintain the health of the bird.

The type of feed provided for a bird varies according to species. The shape and size of a bird's beak usually determines the feed type. Typically, pet birds either have a beak that is

hooked or a beak that is straight. Hook-beaked birds such as cockatiels, parakeets, and parrots can typically eat bigger seeds because they can crack the seeds to get at the inside contents. Straight-beaked birds such as canaries, finches, and mynahs require smaller seeds because they tend to eat the whole seed rather than cracking them open to eat the contents.



Birds – Canaries

Canaries are the second most popular pet bird. They have a life expectancy of 10 to 12 years, are straight-beaked, are smaller than many other feathered pets (only about 5 inches in length), and come in many colors. The ability to sing is sex dependent (males sing better than females). Additionally, canaries do not usually sing during molting. Molting is an annual process (occurring each summer) in which the bird sheds its feathers and grows new ones.

Canaries, like most birds, are particularly fragile during the molting season. It is best to purchase them during the winter or spring months. This is also a time of peak singing, which is thought to be connected with the mating process. This is followed by the egg laying period, the hatching and raising of the young, and the molt.

Nonbreeding canaries perform quite well on commercially produced birdseed/feed mixtures or on a seed mixture containing 35 percent

canary seed and 65 percent millet. Breeding birds require a feed source high in protein, and they need extra supplementation of vitamins/minerals. The use of “special diets” to promote singing is not necessary if fresh greens, protein rich foods (wheat germ, hard-boiled egg chips, etc.), and the proper supplementation of vitamins/minerals are provided. Occasional treats of peanut butter and fruit are much appreciated by all canaries. Water should always be clean, fresh, and readily available.

Birds – Cockatiels



As pet birds, cockatiels rank third in popularity. They originated in Australia, have a life expectancy of 15 to 20 years, are hook-beaked, are moderate in size (about 12 inches in length), come in many colors, and have a crested head that makes them look regal and distinguished. They have a calm and cool disposition and can be kept with smaller birds. People are also attracted to cockatiels because they can be taught to talk, whistle or perform tricks, are very tame, and often become very fond of or attached to a human.

When compared to other birds, female cockatiels are relatively easy to distinguish from

males. Adult males have yellow faces with orange highlights around the cheeks. Adult females have pale yellow faces and a dull orangish color under the tail. Since sexing is fairly easy, breeding can be accomplished with greater ease, and these birds will breed in captivity. They need a large breeding box (about 15 inches high and a floor that is 9 inches by 9 inches) that should be hung near the top of the cage. The bottom of the box needs to be covered with wood chips or some other non-dusty nesting material. The box entrance should be about two-thirds of the way to the top of the box, and a ladder should extend from the entrance to the bottom of the box.

Nonbreeding cockatiels perform quite well on commercially produced birdseed/feed mixtures or on a seed mixture that is 30 to 35 percent canary seed, 60 to 65 percent millet, and 5 percent hulled oats. Breeding birds require a feed source that is higher in protein, and they need extra supplementation of vitamins/minerals. It is important to note the eating habits of cockatiels because they dehusk the seeds, discard the husks, and swallow seeds whole. The discarded husks fall throughout the cage, including into the feed cup. This process is common to all seed eaters, which often makes the feed cups appear full, but they can actually be empty of the nourishing seeds the birds require. It is extremely important to check the feed cups daily.

Cockatiels should have plenty of food and daily supplements such as vegetables, fruits, protein-rich items (alfalfa pellets, hard-boiled egg chips, wheat germ, etc.), vitamins, and minerals (especially calcium). Water should always be clean, fresh, and readily available. A calcium block or cuttlebone should be provided to keep their beaks trim and to provide a source of supplemental calcium.



Birds – Cockatoos

Cockatoos are large birds. They originated in Australia, have a very long life span (60 to 80 years and sometimes up to 100 years), are hook-beaked, are black or white in color, and have a crested head that gives them an air of royalty or distinction. They tend to be very demanding and affectionate birds. Most cockatoos do not like their owners sharing time with other people or with other pets. Cockatoos can be temperamental, and when they get upset they may bob their head, vocalize (very loudly), and/or pull out their feathers. Feather pulling is not always a signal the bird is upset. A viral disease called beak and feather syndrome can also cause birds to pull their feathers.

Nonbreeding cockatoos perform quite well on commercially produced birdseed/feed mixtures or on a seed mixture that is 30 to 35 percent canary seed, 60 to 65 percent millet, and 5 percent hulled oats. Breeding birds require a feed high in protein, and they need extra supplementation of vitamins/minerals. It is important

to note the eating habits of cockatoos because they dehusk the seeds, discard the husks, and swallow seeds whole. The discarded husks fall throughout the cage, including into the feed cup. This process is common to all seed eaters, which often makes the feed cups appear full, but they can actually be empty of the nourishing seeds the birds require. It is extremely important to check the feed cups daily.

Cockatoos should have plenty of food and daily supplements such as vegetables, fruits, protein-rich items (alfalfa pellets, hard-boiled egg chips, wheat germ, etc.), vitamins, and minerals (especially calcium). Water should always be clean, fresh, and readily available. A calcium block or cuttlebone should be provided to keep their beaks trim and to provide a source of supplemental calcium.

Many people confuse cockatoos and parrots. They are similar. They cost several hundred dollars each (and sometimes more than \$1,000), have virtually the same nutritional needs, eat about the same things, and look pretty much the same. A cockatoo can do everything a parrot can do except talk, which is the big difference between the two birds.

Birds – Finches

Finches are becoming more common as pets, but they still trail parakeets, canaries, cockatiels, and others in terms of popularity. There are many varieties of finches and, as a result, the place of origin depends on the variety. The most popular varieties (such as Bengalese, Zebra, and Lady Gouldian) come from South America, Asia, and Australia. Finches have a life expectancy of 5 to 7 years, are straight-beaked, are a smaller bird (only about 4 to 6 inches in length, depending on variety), come in many colors or color patterns (depending on variety), are active, and tend to spend the day singing and chirping.



Finches are fairly hardy, not very messy, easy to keep as pets, and they provide delightful entertainment. Some types are easy to breed, and this feature also makes them an attractive pet. They are usually easy to obtain from pet shops or from breeders, and they tend to be relatively inexpensive, typically costing from \$5 to \$50. However, some of the rare and unusual varieties can cost \$200 or more.

Nonbreeding finches perform quite well on commercially produced birdseed/feed mixtures or on a seed mixture containing 35 percent canary seed and 65 percent millet. Breeding birds require a feed source high in protein, and they need extra supplementation of vitamins/minerals. Finches should have plenty of food and daily supplements such as vegetables, fruits, protein-rich items (alfalfa pellets, hard-boiled egg chips, wheat germ, etc.), vitamins, and minerals. Finches appreciate occasional mealworms to supplement their usual vegetarian diet. Water should always be clean, fresh, and readily available.

Birds – Mynahs

Mynahs, which are as known as Tropical Asian Starlings, are not very popular as pets. The straight-beaked, crow-like birds originated in India. The most common variety used as a pet is the Indian Hill, which is black with yellow flesh flaps on the back of its head. Mynahs can

talk, but their words are limited to what they learned during the first few years of life.

Mynahs require a feed specifically formulated for them, and it typically comes in the “pelletized” form. Water should always be clean, fresh, and readily available.

Birds – Parakeets

Parakeets are the most popular pet bird. The word “parakeet” applies to various small, slender parrots, with long tapering tails found in Central and South America, Africa, Asia, and Australia. In many other parts of the world, they are known as budgerigars or budgies; Budgerigar means “pretty bird” in the language of the Australian Bushman. Budgerigar is a parakeet native to Australia, with green, yellow, or purple plumage. Another tidbit about parakeets is that there are many ways of spelling the word: parakeet, parrakeet, parroket, paraquet, paroquet, and parroquet.

Parakeets make wonderful pets because they are a smaller bird, typically about 6 to 8 inches in length, have a life expectancy of 15 to 18 years, are inexpensive to purchase (compared to other pet birds), are readily available, come in many colors, are easily tamed, and may talk. The typical parakeet is capable of reciting 10 to 15 words, but some parakeets have been known to have a vocabulary of up to 500 words. Unlike canaries, both male and female parakeets are capable of talking.



Parakeets may be raised as a single bird or in a group, with equal success. Breeding is not difficult, but parakeets will only mate if two or more pairs are within sight and sound of each other. A nest box is required. The box should be about half the size of a shoe box and contain about an inch of wood shavings in the bottom. It should be attached to the side of the cage and have a back door for removal of the chicks if they are to be hand raised.

Nonbreeding parakeets perform quite well on commercially produced birdseed/feed mixtures or on a seed mixture containing 30 to 35 percent canary seed, 60 to 65 percent millet, and 5 percent hulled oats. Breeding birds require a feed source high in protein, and they need extra supplementation of vitamins/minerals.

It is important to note the eating habits of parakeets because they dehusk the seeds, discard the husks, and swallow seeds whole. The discarded husks fall throughout the cage, including into the feed cup. This process is common to all seed eaters, which often makes the feed cups appear full, but they can actually be empty of the nourishing seeds the birds require. It is extremely important to check the feed cups on a daily basis.

Parakeets should have plenty of food and daily supplements such as vegetables, fruits, protein-rich items (alfalfa pellets, hard-boiled egg chips, wheat germ, etc.), vitamins, and minerals (especially calcium). Water should always be clean, fresh, and readily available. A calcium block or cuttlebone should be provided to keep their beaks trim and to provide a source of supplemental calcium.

Birds – Parrots

Parrots are large birds native to Central and South America, Africa, Asia, and Australia. They have a very long life span (60 to 80 years and sometimes up to 100 years), are hook-beaked, and come in many colors. They tend to be very



demanding and self-centered. Most parrots do not like their owners sharing time with other people or with other pets. Parrots can be temperamental, and when they get upset they may bob their heads and squawk (very loudly) to express their displeasure.

Nonbreeding parrots perform quite well on commercially produced birdseed/feed mixtures or on a seed mixture that is 30 to 35 percent canary seed, 60 to 65 percent millet, and 5 percent hulled oats. Breeding birds require a feed high in protein, and they need extra supplementation of vitamins/minerals. It is important to note the eating habits of parrots because they dehusk the seeds, discard the husks, and swallow seeds whole. The discarded husks fall throughout the cage, including into the feed cup. This process is common to all seed eaters, which often makes the feed cups appear full, but they can actually be empty of the nourishing seeds the birds require. It is extremely important to check the feed cups daily.

Parrots should have plenty of food and daily supplements such as vegetables, fruits, protein-rich items (alfalfa pellets, hard-boiled egg chips, wheat germ, etc.), vitamins, and minerals (especially calcium). Water should always be clean, fresh, and readily available. A calcium block or cuttlebone should be provided to keep their beaks trim and to provide a source of supplemental calcium.

Many people confuse cockatoos and parrots. They are similar. They cost several hundred dollars each (and sometimes more than \$1,000), have virtually the same nutritional needs, eat about the same things, and look pretty much the same. A cockatoo can do everything a parrot can do except talk, which is the big difference between the two birds.

Fish – The Basics

The history of fish as pets traces back to ancient China, some sources say as long as 1,000 years ago, others say since the 10th century, and yet others simply say for many centuries. The sources may differ on the length of time, but they agree on the type of fish that started it all – the carp. Following many centuries of specific matings the carp evolved into two breeds (the goldfish and the koi). The big difference between these two types of carp is that goldfish were bred to be kept inside, often in glass containers for exhibition purposes, while koi were bred to be kept outside in ponds. Together they comprise one of the three broad categories of pet fish: freshwater. The other two categories are tropical and saltwater. Each of these categories will be addressed later, but several things apply to all three.

Regardless of the type of fish kept as pets, water quality and tank cleanliness are of extreme importance. So let's take a tour of an aquarium to see how it works and the purpose of each piece of equipment. The water is clear and non-chlorinated. There are various kinds of decorations in the tank that provide cover and a natural or realistic environment for the fish. Plants are growing from the pebbles/gravel in the bottom of the tank, and a stream of air bubbles is coming up from the pebbles/gravel. The purposes of the plants are to provide cover, a natural setting, oxygen for the fish, and to absorb the carbon dioxide exhaled by the fish. The air bubbles come from an air compressor and a tube under



the pebbles/gravel. The bubbles add oxygen to the water so the fish can breathe. There are also air bubbles coming up from a clear tube sticking into a plastic mesh under the mixture of pebbles and gravel. The purpose of this is to filter water through the gravel and to oxygenate the water as it travels up the plastic tube and back into the tank. Hanging off the back of the aquarium is another type of water filter system, which also helps ensure the water remains clear and fresh.

Hanging in the other back corner of the tank is a heater used to keep the water within the desired temperature range. In the opposite front corner of the tank is a thermometer. Placing the heater and thermometer at opposite corners helps ensure the water is the correct temperature throughout the tank. This is important because even a small temperature change of 5 degrees can cause problems. If the water gets too cold or too hot, the fish may become ill or even die. Hotter than recommended temperatures also encourages the growth of a green scum called algae, which will cloud the water, possibly damage equipment, and make cleaning difficult.

A cover helps prevent fish from jumping out. The cover usually has a light, which allows the fish to be observed and provides energy for the plants to grow (like the sun does for naturally growing plants). Typically, the cover has a door

that provides access to the water for cleaning and feeding.

It is important to note that the water will be clear when the filter systems are working properly, the correct temperature is maintained, and the proper feeding system is being used. Over feeding is one of the biggest problems with fish. It leads to cloudy water because the feed falls to the bottom of the tank and decays, which causes dirty water and gases that can (and will) make the fish sick. A rule of thumb is to only feed what the fish will eat in about five minutes.

The final thing to note about the tank is the number of fish. Too many fish causes stress and disease, which leads to sickness and death. It is recommended to have one fish per gallon of water, although this varies according to the size and the type of fish in the aquarium.



Fish – Freshwater

Goldfish and koi comprise this category of pet fish. They are the most adaptable of all the fishes. They easily adjust to a wide range of temperatures, but 67 to 72 degrees is best. They will eat most any type of food. These characteristics make them an excellent choice for first-time fish owners.

Goldfish come in numerous shapes, sizes, colors, and color patterns. Many varieties have their own special features, which make them an interesting pet. These features include large

eyes, goggle eyes, very round bellies, or very short/very long tails. Goldfish are among the least expensive fish to purchase, which adds to their appeal as pets.

Koi look similar to the original carp, except they are brightly colored. Like all carp, koi are hardy fish and will survive in natural ponds as well as man-made specialty ponds. Koi are more expensive than their goldfish cousin, but most varieties are very affordable; however, a few varieties are very expensive, costing more than \$1,000 each.



Fish – Tropical

Tropical fish tend to be more delicate than goldfish or koi, and most are much smaller than goldfish or koi. Therefore, they should not be kept together because the tropical fish may become a meal.

Tropical fish come in an array of colors, color patterns, and body shapes. Guppies are probably the cheapest and easiest to raise, so they tend to be an excellent choice for first-time tropical fish owners. Other popular tropical fish are neon tetras (commonly known as neons), cardinal tetras, zebra tetras (commonly known as zebras), swordtails (which come in many colors), algae-eaters, the many types of catfish, platies (which come in many colors), loaches (which are a snake-like fish), angel fish (commonly known as angels), gouramis (the kissing variety is the most popular), and others.



Remember, these are tropical fish so they like warmer water, typically from 72 to 78 degrees. Therefore, it is very important to make sure the heater is working properly and is set at the correct temperature.

Fish – Saltwater

Caring for these fish is certainly not for beginners. They require the most detailed care and are the most expensive. The equipment required and the extra supplies needed also raise the cost of owning these fish.

They are native to the oceans and seas of the world, which means an aquarium must be filled with saltwater (not freshwater like for goldfish,

koi, or tropical fish). Water quality is of utmost importance to the health and well-being of saltwater fish. The concentration of ocean salt in the water must constantly be monitored and maintained at the proper level. Additionally, the water temperature (typically around 60 to 65 degrees for saltwater fish) must be consistent.

Saltwater fish, like tropical fish, come in a variety of colors, color patterns, and shapes. The main feature that typically distinguishes saltwater fish from tropical fish is the brightness and deepness of the color or color pattern. The colors of saltwater fish almost seem to be reflective and bright, like a neon sign.



Mammals – The Basics

Many small mammals are kept as pets. The most popular (especially with youths) are cavies (commonly known as guinea pigs), chinchillas, ferrets, gerbils, hamsters, hedgehogs, and mice. The specific housing needs and feeding requirements vary from animal to animal and will be discussed individually. Providing fresh feed, fresh water, and clean housing, watering, and feeding facilities are important to maintain the health of the animal. Toys, such as running wheels, ladders, etc., should also be provided for exercise and entertainment.

Since these animals are fairly small, temperature of the housing is an important factor. This tends to be only a minor problem because these animals are usually kept within the house. Since the temperature of a house tends to be around 65 to 75 degrees (for the comfort of the owner), it also provides the appropriate temperature

for the pet. Housing should not be placed in a location that receives direct drafts from heating and/or air conditioning vents or from a ceiling fan because the drafts or quick temperature changes may cause illness or even death of the pet.

Mammals – Cavies (Guinea Pigs)

Cavies are native to South America (Argentina, Brazil, and Peru) and have been domesticated there for many centuries. British sailors first brought cavies to England about 250 years ago. The story indicates the animals sold for a guinea (a gold coin), which is how they acquired “guinea pig” as a nickname.

Full grown cavies are 8 to 10 inches long and about 4 inches tall, weigh about 3 pounds (depending on breed), and have a life expectancy of 5 to 7 years. They are relatively quiet (but have a rather regal whistle), calm, odorless (if

their home is cleaned on a regular basis), easy to handle (always put a hand under the body and provide support when lifting or carrying the animal), and easy to care for. Cavies come in a variety of colors, color patterns, and body types/shapes, and they have a variety of hair lengths and textures. There are 11 recognized breeds in the United States. The most popular ones are the Abyssinian (short, rough coat), American (smooth coat) which is also known as the English Short Hair, Peruvian (long coat), Teddy (wiry coat and curly whiskers), Silkie (soft and satin-like coat), and White Crested (has a white crest).

Cavies, like people, cannot generate their own vitamin C. Therefore, vitamin C along with salt (because cavies require additional salt) become a focus of supplementation in the diet of cavies. Salt can be supplied with a salt spool hung in the animal's home. Commercial food is best for the cavy, but only purchase small amounts so it stays fresh, because it loses vitamin C when it becomes stale. Provide additional vitamin C by feeding dark leafy greens, citrus fruit, apple or carrot pieces, or a vitamin supplement. Do not feed all of these at the same time – only provide one or two at a time and only in small quantities because cavies are not extremely active (they do not jump or climb) and, as a result, they tend to become overweight from lack of activity. Additionally, grass hay (not alfalfa hay, because of its high protein content) can be provided on a daily basis because it takes more calories to eat than it provides and because cavies, like all rodents, need something to provide wear on their teeth since the teeth continually grow. This also helps prevent the cavy from chewing on its own hair, a habit that many cavies will pick up if their teeth are not kept busy. Clean and fresh water should be provided on a continual basis. Clean the feed and water cups and remove feces daily.

Cavies require at least 1,000 square inches of floor space for an adult animal, i.e. a 30" by 36" cage is 1,080 square inches. If additional cavies are housed together, then additional floor space is also required. They need housing that is clean, dry, well-ventilated, has a temperature of 60 to 80 degrees, and provides a place to sleep such as a nesting/sleeping box in a corner because cavies like separate sleeping quarters. Shredded paper, wood shavings, processed corn cobs, and other similar items are preferred bedding materials because they are relatively dust-free, nontoxic, absorbent, and easy to obtain. Be sure to change the bedding and thoroughly clean the complete housing facility (nesting box, toys, etc.) at least once a week.



Mammals – Chinchillas

Chinchillas, like cavies, are native to South America (Argentina, Bolivia, Chile, and Peru). They have been domesticated for many centuries but still tend to be less tame than many of their counterparts. They have a life expectancy of 6 to 8 years, are highly valued for their fur (which makes them rather expensive), greatly enjoy cleaning and dusting themselves (which is why a shallow pan of sand should be provided), are odorless (if their home is cleaned on a regular basis), tend to be nervous, and are very alert, traits that make them popular as pets. For those who work or go to school during the day,

chinchillas are excellent pets because they are most active in the early morning and evening hours.

Male chinchillas tend to tame quicker and, as a result, they typically make better pets for young people. Chinchillas should be housed separately because they may be aggressive to other chinchillas. They need housing that is clean, dry and well-ventilated, has a temperature of 65 to 75 degrees, provides a place to sleep such as a nesting/sleeping box in a corner because chinchillas like separate sleeping quarters, and has a sand box for cleaning and dusting themselves. Be sure to change the bedding and sand at least once a week, and thoroughly clean the complete housing facility (nest box, sand box, toys, etc.) on a weekly basis.

Commercial food (either chinchilla pellets or rabbit pellets) is best for the chinchilla, but only purchase small amounts so it stays fresh. The pellets (along with timothy hay) can be continually available or fed on a once-a-day basis. Provide supplementation by feeding fresh greens or pieces of fresh fruits or vegetables. Remember, a chinchilla is a rodent so its teeth continually grow. A pumice stone or something similar needs to be provided for the chinchilla to gnaw on so its teeth are kept trimmed. Clean and fresh water should be provided on a continual basis. Finally, clean the feed and water cups and remove feces daily. This will keep odor to a minimum and maintain the cleanliness of the cage, which will ultimately help maintain the health of the chinchilla.

Mammals – Ferrets

The ferret has been domesticated for many centuries, and it is believed to be the animal known as the “*Vermin Exterminator*” in Europe as far back as 400 B.C. It has been used in New Zealand for rabbit hunting since the earliest of recorded times. It was imported to the United



States in the late 19th century and became a popular pet in the U.S. in the 1980s probably because it is an unusual animal and does not cost much to keep; however, not everyone is in agreement with the merits of having a ferret as a pet due to its wild tendencies and its ability to escape. The American Veterinary Medical Association has issued a statement cautioning people about owning ferrets as pets, and California passed a regulation prohibiting households from owning ferrets as pets.

The ferret is a fairly small animal. It has a long and sleek body, long neck, small head, and long tail. It is a carnivore (meat eater), very smart (their intelligence has been compared to that of dogs), very curious and active, and it has a life expectancy of 8 to 12 years. Males are called hobs and weigh 3 to 6 pounds. Females are called jills and weigh 1 to 3 pounds. Babies are called kits.

Ferrets can be trained to walk with a leash and to use a litter box. They like sleeping places that are tight, secure, and dark, but they need plenty of space for moving and stretching when they are awake. The cage should be a minimum of 3 feet long, 2 feet wide, and 2 feet high; however, larger cages are much preferred. The cage should be clean, dry, well-ventilated but non-drafty, and have a temperature of 65 to 75 degrees. Be sure to thoroughly clean the complete

housing facility (sleeping quarters, litter box, toys, etc.) weekly.

Since ferrets are carnivores, they need food high in protein. Some pet stores have commercially prepared ferret food, which is the best food to provide; however, since this is not available from all stores, a substitute is needed, and kitten/cat food (canned or dry) is an excellent food source. To provide variation in the ferret's diet, switch between dry food and canned food. Clean and fresh water should be provided on a continual basis. Remember to clean the feed and water cups and remove feces daily. This will keep odor to a minimum and maintain the cleanliness of the cage, which will ultimately help maintain the health of the ferret.

Health care for a ferret is similar to the care given to a dog or cat. In addition to the previously mentioned items, a ferret should be vaccinated against distemper and rabies, and they should be monitored and treated for heartworms. Ferrets have scent glands, which give off a musky odor. Since this is not a characteristic desired by most ferret owners, these glands are usually removed when the ferret is spayed (for females) or neutered (for males). Spay and neuter are terms used for defining the surgical procedure that makes an animal incapable of reproducing.

Mammals – Gerbils

Gerbils are native to the deserts of Africa and Asia. They are very small animals, weighing about 3 ounces. They make good pets because they are easily obtainable, are playful, require very little space, produce very little odor, cost very little to purchase and take care of, and have a life expectancy of 4 to 5 years or more. These are among the reasons they have been called America's favorite pocket pet, a very fashionable nickname given they only arrived in the United States in 1954.

Gerbils are more fragile than most pets and can be easily injured. Therefore, they may not be a good pet for a young child. Many people believe the proper way to pick up a gerbil is by the tail. This is not true because the skin can easily tear and come off of the tail. Gerbils should be picked up by the loose skin around their necks or scooped and supported from under their bellies.

Gerbils are very social animals; therefore, they should not be reared by themselves. They are friendly animals that prefer the company of other gerbils, and they need a home that is clean, dry and well-ventilated, and has a temperature that approximates room temperature (65 to 75 degrees). A 10 gallon terrarium makes an excellent home for a couple of gerbils. Make sure it has a lid that closes and latches properly because gerbils are very clever creatures that tend to escape if their home is not secure.

Since the gerbil is a rodent, it requires material for gnawing of teeth, and toys for exercise and entertainment. The bottom of the terrarium should have about an inch of litter (non-dust materials are the best). For sleeping, a piece of burlap or cloth should be supplied because a gerbil will chew it up and place it along the edge of its home. Since gerbils are native to the desert, they produce little urine and have very dry feces, so a complete and thorough cleaning of the house facility (including toys and other items) is only needed every 2 to 3 weeks.

Since gerbils are so small, they only eat about one tablespoon of food per day. Typically, they will not overeat so becoming overweight is not an issue. Commercially produced feed is available for gerbils; however, since they are vegetarians, they can also be fed grains and seeds. A piece or two of chopped fruit or vegetable or fresh grass (on occasion) is a treat preferred by gerbils. Be careful not to give too much fruit or

vegetable, including lettuce and celery, as this can lead to diarrhea. As with all animals, clean and fresh water should be provided on a continual basis. For gerbils, a water bottle seems to work the best. Clean the feed and water cups (or water bottle) daily.



Mammals – Hamsters

The original home of hamsters was Asia. The word “hamster” is derived from the German word hamstern, which means to hoard – something hamsters do with extra food. The cheek pouch is a distinguishing feature of hamsters, and it can be extended about 2 inches when filled with food or nesting materials. They first appeared in the United States in 1938 as a research animal, but they quickly became popular as pets. Their popularity rose because they are trainable (especially if obtained when they are 6 to 8 weeks old), calm (if handled on a regular basis), and fairly gentle, and produce very little odor, cost very little to feed or take care of, and have a life expectancy of 3 to 4 years.

Unlike most other rodents, hamsters do fine living alone. They do not require a large cage; however, the cage should be large enough to allow exercise and for the hamster to choose different sleeping, eating, playing, and bathroom areas. Toys such as an exercise wheel are

a must. A hamster will spend many hours using the wheel and playing with other toys. The cage should be made of metal (because hamsters, like all rodents, gnaw on things), have a removable bottom for cleaning ease, and have a tight fitting lid so they cannot escape.

They need housing that is clean, dry, well-ventilated and non-drafty, and has a temperature that approximates room temperature (65 to 75 degrees). Bedding should be made of an absorbent and dust-free material such as shredded paper, wood shavings (cedar is preferred), peanut hulls, processed corn cobs, or similar materials. The hamster likes a handful of shredded paper or cotton to build a nest with which will resemble an igloo when it is cooler and a bird nest when it is warmer. A hamster will select one corner of its cage for a bathroom so that corner needs daily cleaning and fresh bedding. Thoroughly clean the complete housing facility (platforms, exercise wheels, other toys, etc.) weekly. This is also a good time to check whatever material has been provided for gnawing, and replace it if needed.

The simplest way to provide the correct diet for a hamster is with commercially produced hamster feed. Since hamsters, like gerbils, only require a tablespoon of food each day, do not buy big bags of feed that will get stale and lose their nutrient content. Along with the processed feed, it is important to provide a supplement of fruit, vegetables, and grains as this helps avoid constipation. Small amounts of lettuce, carrots, celery, rolled oats, and non-citrus fruits such as apples and pears greatly assist in preventing constipation. Do not provide citrus fruits like grapefruits, oranges, or satsumas (seedless mandarin oranges) because they can cause health problems. Clean and fresh water should be provided on a continual basis. Finally, remember to clean the feed and water cups daily.



Mammals – Hedgehogs

Hedgehogs are fairly new to the pet world, but they are becoming quite popular. This popularity is due to their uniqueness, quiet behavior, fairly calm behavior, low cost care, and long life span of 10 or more years. The hedgehog seems to be a combination of many other animals: for defense it has spines (duller spines) like a porcupine; when threatened it curls up into a tight ball like an armadillo; it likes to sleep in dark and confined spaces like a ferret; it prefers a separate sleeping area like a chinchilla; and it prefers to live alone like a hamster.

Hedgehogs are very territorial, which is one of the reasons they prefer living alone. They are clean animals and will use a litter box, which should be cleaned daily. The housing provided should be maintained at 70 to 75 degrees, draft free, dry, and big enough to include room for a litter box, space for a couple of toys, and a separate sleeping area. A piece of four-inch diameter PVC pipe about 10 to 12 inches long with a cap on one end makes an excellent sleeping area. The pipe should be anchored so it does not roll around. Change all of the bedding, change the litter box sand, and thoroughly clean the complete housing facility (bed tube, toys, etc.) weekly.

The diet of the hedgehog is different than other mammals previously discussed because it is an insectivore (insect eating). The diet should in-

clude live food items such as meal worms, crickets, grasshoppers, small frogs, and other similar creatures. If these are not available, a suitable substitute is a five-to-one mixture of high-quality canned dog food and cottage cheese. Some sources state dry cat food can also be fed, but other sources do not promote this. Regardless of what is fed, a vitamin supplement should also be provided. Clean and fresh water should be provided on a continual basis. Clean the feed and water cups daily.

Mammals – Mice and Rats

Virtually all of the mice and rats kept as pets have been purchased from a pet store or breeder who has bred them for pets for many generations. This why they are much less aggressive than their wild cousins, have become friendly, seldom bite, and have a life expectancy of up to 3 or 4 years. Mice and rats have tiny claws for grabbing things and long tails for balancing. They come in many color patterns and in many colors such as black, blue, brown, cinnamon, fawn, sable, and white.

Mice and rats are very social animals, so it is best to raise them in groups of at least two or three. They are very small animals so the space requirements are not large. The most important aspect to consider is escape. Because mice can get through an opening as small as one-quarter of an inch, many owners use a terrarium



for housing. Mice and rats need housing that is clean, dry, well-ventilated and non-drafty, and has a temperature that approximates room temperature (65 to 75 degrees). Bedding should be an absorbent and dust-free material such as shredded paper, wood shavings, peanut hulls, processed corn cobs, or other similar materials. Change all of the bedding and thoroughly clean the complete housing facility (platforms, exercise wheels, other toys, etc.) on a weekly basis. This is also a good time to check whatever material has been provided for gnawing, and replace it if needed.

Mice and rats will eat most anything. Commercially produced food is available and, as with the other animals discussed, is the easiest way to supply the nutrients required by pet mice and pet rats. However, many people prefer to mix and match the feed provided, so it is important to know that mice and rats prefer starchy foods like seeds, cereal grains, and rice. Fruits and vegetables such as chopped carrots, apple pieces, grapes, raisins, etc. provide a nice variation and are readily eaten. Regardless of what is fed, a vitamin supplement should be provided. Clean and fresh water should be provided on a continual basis, and remember to clean the feed and water cups daily.

Other Animals – The Basics

The specific care required by the animals listed in this section vary; however, regardless of the animal (whether listed in this booklet or living in the wild), there are basic requirements that must be met and maintained for the survival and health of the animal. All creatures need food, shelter, and water. Since all pets (including those listed in this section) rely on their owners to provide these necessities, the basic needs will have to be furnished by the owners if their animals are going to survive and have healthy lives. This will help lead to many hours of enjoyment and pleasure for the owners.



Other Animals – Ants

An ant farm provides the opportunity to observe a very social animal that lives in a colony. There are different types of ants (workers, soldiers, queen, etc.) in each colony. Each type of ant has a specific task that benefits the whole colony. Worker ants provide food and build the colony's home. Soldier ants defend and protect the colony. The task of the queen is to produce more ants.

Pet stores sell complete ant farm kits. They have everything needed for a successful beginning: sand, housing, ants, etc. The housing is usually a glass or clear plastic box about 12 inches high, 12 inches wide, and an inch thick. Since it is only an inch thick, it provides easy observation of the ants, both above ground and underground. Due to this design, it is very easy for the whole ant farm to get too hot or too cold in a short period of time. Make sure the farm is not close to a heating or air conditioning vent, ceiling fan, window, or anything else that could cause a sudden temperature change or a wide variation in temperature.

After the ants have gotten off to a successful start, it will be up to the owner to provide the necessary food and water. Provide enough water to moisten the soil, similar to watering a plant, but not so much that it becomes soggy because this can lead to mold and/or drown-

ing of the ants. The food is placed on top of the soil, and the worker ants will take it to the rest of the colony. The ants only need to be fed about every other day, and food remaining on top of the soil after a few hours should be removed. Different types of food (small pieces of fruit, vegetables, bread, cereal, etc.) should be rotated in order to make sure the ants are getting all of the nutrients they need for comfort and health.



Other Animals – Crickets

In many cultures, especially in the Orient, crickets are kept as pets because they are considered good luck and because their “singing” is thought of as beautiful music. Only the male crickets sing. It is believed the purpose of the singing is to attract females and to ward off other males, which is why the males should be housed separately. Male and female crickets are rather easily distinguished from each other because the female has a tube extending from her back and the male does not.

Housing for crickets can simply be a jar or any other clear container that provides enough room for movement, food, water, and shelter, and a secure lid to prevent escape. The housing should contain at least an inch of sand and/or soil in the bottom. It should also have a few leaves and twigs because these provide natural shelter and surroundings.

Crickets need a continual supply of clean and fresh water. Be sure to change it daily, which should be quite easy since the best way to provide water for a cricket is with a very small sponge, piece of cloth, or cotton ball. Crickets, like ants, will eat most anything. A rotation of small pieces of cereal, vegetables, fruits, potatoes, lettuce, cabbage, and occasionally meat will provide all of the nutrients needed by the cricket. Crickets should be fed two to three times a week, and the excess food should be removed after a few hours.

Other Animals – Hermit Crabs

Hermit crabs get their name because they live alone in a shell discarded from another creature; however, hermit crabs are very social. In the wild, they travel in groups of up to 100 or more. Hermit crabs can live 12 to 15 years and are decapods (have 10 legs); the front pair of legs have evolved into two claws or pinchers. The two pinchers differ in size because they have different purposes. The big one is for defense and climbing. The smaller pincher is for eating and climbing. Another difference between hermit crabs and many other animals is that they have an exoskeleton (outside skeleton), which is shed every 12 to 15 months, depending on how fast they grow. This process results in a need to “change” its borrowed shell, which is why several shells should be provided in its home. Shells are available from pet stores.



A terrarium makes an excellent home for hermit crabs. Cover the bottom with sand or fine gravel, and provide climbing objects to help keep the crab active. A small pond also makes an attractive addition and can provide a water source for the crab. The water area does not need to be any deeper than an inch or two and can slope into the shore. In order to maintain good water quality, about one-third to one-half of the water should be changed weekly. When this task is undertaken, it is also a good time to check and clean the whole terrarium so a healthy home is maintained. Since crabs like to climb, a tight and secure cover needs to be placed on top of the terrarium. The temperature should approximate room temperature (65 to 75 degrees), and the terrarium should not be subjected to sudden or drastic temperature changes such as those caused by a heating or air conditioning vent, ceiling fan, window, etc.

Hermit crabs in the wild eat fruits, vegetables, grains, leaves, decaying wood, meat, and other similar items. Pet crabs will eat tiny portions of dry dog food, dry cat food, uncooked oatmeal or cornmeal, fruits, vegetables, and apple bits. They especially like vanilla wafers.

Other Animals – Spiders

Ants and crickets are insects (six legs), and the hermit crab is a decapod (ten legs). A spider is different from these: it is an arachnid, meaning it has eight legs. However, having eight legs is where many of the similarities between the



many species of spiders end. Some spiders, like tarantulas, are very large and can eat things as large as mice. Other spiders are so small they are hard to see with the naked eye. Some spiders spin webs, and some do not. Some spiders live in trees, and others are ground dwellers. Some spiders eat on a daily basis, and others eat only once or twice a week. There are other differences between the many species of spiders, so the exact care required will be determined by the species selected for a pet. This information can be obtained from the place of purchase, books, Internet, etc.

There are similarities between all species. Regardless of how often they eat, most spiders prefer live food. A continuous supply of water should be provided, either through spraying by the terrarium sides or via a small dish placed in the terrarium. Most spiders prefer a temperature close to normal room temperature (65 to 75 degrees). The top of the housing needs to close tightly and securely in order to prevent escape.

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Crossword Clues-Across

1. Guinea pig, other name
2. Valued for their fur
5. Saltwater, ___ water
8. Nap time, ___ time
9. Frozen water
10. Water turtle
12. Hedge ___
13. Land turtle
14. It has 10 legs
16. Companion animals
17. Mother
18. Glass tank designed as part land and part water
19. Adult tadpole
24. Meal time

25. Glass tank, a landscape
27. Descendant of carp
28. Part of a foot
31. Not feeling well
32. All the surroundings
33. Looks like a big mouse

Crossword Clues-Down

1. Ancestor of goldfish
3. It has six legs
4. Home, like a den
5. An amphibian, looks like a snake with legs
6. Glass tank, water filled
7. 2nd most popular bird
10. Large spider, eats mice

11. Cheapest and easiest tropical fish to raise
12. ___ hog
15. Third most popular pet bird, has a crested head
16. Large bird that talks
18. Most popular pet bird
20. Gets its name from the German word hamstern
21. Hermit _____
22. Very small mammal, arrived in U.S. in 1954
23. A reptile, looks like a snake with legs
26. Crow-like pet bird
29. Male ferret
30. Lives in a colony

1 C	A	V	Y		2 C	H	3 I	N	C	H	I	4 L	L	A			5 S	E	6 A		
A							N				A				7 C		A		Q		
8 R	E	S	T				S				I				A		L		U		
P					9 I	C	E		10 T	E	R	R	A	P	I	N		A		A	
				11 G			C		A						A		M		R		
12 H	O	G		U			13 T	O	R	T	O	I	S	E		R		A		I	
E				P					A						Y		N		U		
14 D	E	15 C	A	P	O	D			N			16 P	E	T	S			17 D	A	M	
G		O		Y					T			A						E			
E		C				18 P	A	L	U	D	A	R	I	U	M		19 F	R	O	G	
		K		20 H		A			L			R				21 C					
22 G		A		A		R			A			O				R		23 L			
24 E	A	T		M		A						25 T	E	R	R	A	R	I	U	26 M	
R		E		S		27 K	O	I								B		Z		Y	
B		I		28 T	O	E				29 H				30 A				A		N	
31 I	L	L		E		32 E	N	V	I	R	O	N	M	E	N	T			R		A
L		S		33 R	A	T					B				T				D		H

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