

# PEST SEASONALITY AND DISTRIBUTION

## Commonly Occurring Pests

### VERTEBRATES

#### **Rodents:**

##### *Norway and Roof Rat*

##### *Activity periods:*

Generally, rats have two activity periods; one within an hour following sunset and again just before dawn. Rats sometimes change nocturnal to a diurnal behavior depending on human activity, competition and the availability of resources. In undisturbed areas, and if they are not bothered, rats may roam about, seeking food and mates during any part of the day or night.

##### *Migrations and Home Ranges:*

In urban rat populations, individuals may live year-round in the same alleyway, basement or building, with little dispersal, provided that food, water and harborage remains available. These populations may only disperse to other buildings or areas if their habitat is modified in some manner.

Wild rat populations living in rural areas and farmland fields, however, exhibit more of a migration pattern. These rats may leave the fields in the fall when food and cover decreases and seek heated buildings. If food remains available year-round, rats may remain in these areas without any dispersal. Generally, it is safe to assume if rodents find suitable harborage, food, warmth and water in buildings, there is little reason for them to leave.

The home range of an animal is the area it covers in its day-to-day travels for food, water and mating. An inherent property of a rodent's home range is that it is fixed, in the sense that it doesn't wander randomly. In general, the home range of the average rat colony in urban areas is 25 to 100 feet, but home ranges may vary from one environment to the next.

The distance a rat moves is dependent upon the relation between suitable harborage and food. If the two are close together, the rodent will travel little. If far apart, the rodent will travel accordingly. There are really no seasonal movements of rats although some local adjustments occur in spring or fall due to environmental conditions.



E.J. Taylor

Norway Rat



Roof Rat

**Months Active: Outdoors: March through October, will move indoors during winter  
Indoors: January through December**

#### *House Mouse*

#### *Home Range and Migration:*

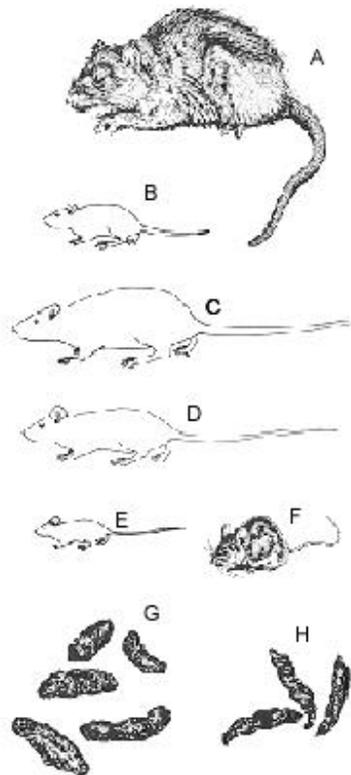
Feeding, social and movement behavior of mice is not easily generalized. For example, the behavior of a population infesting a supermarket may be dramatically different from those living in a home. Most established mouse populations inside buildings exist in groups of related individuals within which there is probably a high degree of social contact. Well established commensal mouse populations are divided into territories containing family and territorial units which are defended by a single male.

Home ranges and territories vary according to the specific environment. In general, when conditions are favorable, the home ranges of mice tend to be small. A mouse in a food warehouse may never leave a single pallet. In less favorable conditions, mice will travel distances greater than 50 feet in search of food. In general about 12 feet is normal. (Therefore it is recommended that when baiting in high density situations that the distribution of a larger proportion of bait placements should be spaced close together).

As with rats, rural mice will tend to move indoors during the fall and winter to find a more favorable resource base.



**Months Active: Outdoors: March through October, will move indoors during winter  
Indoors: Throughout the year**



Commensal rodents. A-C, Norway rat.  
D, Roof rat. E-F, House mouse.  
G, Blunt droppings of Norway rat, enlarged.  
H, Pointed droppings of house mouse, enlarged greatly

## **Birds**

*House Sparrow:* The house sparrow has adapted to living in close contact to humans. They are found throughout the country, seeming to prefer to live in cities and around rural farm buildings where food and shelter are abundant. They are relatively social birds, nesting in close proximity to one another and flying and feeding in small flocks. Nests of twigs, grass, paper and string are



built in gutters, on rafters, ledges of buildings and on almost any other conceivable elevated places where they can anchor a nest in a semi-protected spot. They frequently build nests inside warehouses. House sparrows are not migratory but in cold climates can show movement between rural and suburban breeding sites and warmer winter roosting sites in cities. Peak breeding season is in the spring.

**Months Active: Year round. Will display semi-migration from rural to domestic sites during winter.**

*Crow:* There are two main species of crow. The large, common crow is found across the country and the smaller fish crow is found in the southeast. They are social birds and the flock is in constant communication. Crows are committed nest builders. They typically build nests in trees, twenty to sixty feet off the ground. They are migratory in the northern parts of the country. Northern birds will fly thousands of miles south during the winter while southern birds will not migrate. In the fall and winter, they will move to better feeding grounds where they coalesce in massive feeding flocks.



**Months Active: Year round. Migratory from northern areas during the fall.**

*Pigeon (Rock dove):* Wild pigeons are one of the most common urban birds. They adapt well to human environments. The abundance of shelter provided by buildings assures pigeons will have ample places to roost and rest. Food and water is often in adequate supply. Pigeons are not migratory and they tend to stay near their birth site. The seasonal cycle is as follows; courtship in the early winter, nest building in late winter and breeding in the spring. In warm climates, breeding occurs year-round, although the peak reproduction occurs in the spring and summer. Nests are usually built in protected places on buildings and other man-made structures.



**Months Active: Year round. Non-migratory. Will stay near breeding site.**

*Starling:* Starlings mate in the spring and build their nests, for the most part, in cavities such as tree holes, bird houses and crevices or confined structural spaces on buildings. After the young

leave the nest, they form small flocks. As the summer progresses, the flocks increase in size from hundreds to thousands. During the winter, the communal roosts usually consist of a larger number of birds than during the summer. Because starlings are somewhat migratory in their habits, in the fall, thousands of starlings may move from northern breeding areas to more southerly regions. Additionally, rural birds may move to warm urban areas during the winter. The daily cycle is one of leaving the nest at sunrise to travel to feeding areas, returning at sunset.



**Months Active: Semi-migratory. May move form northern to southern areas during fall, or to domestic sites for shelter.**

## INVERTEBRATES

### ARTHROPODS

#### Cockroaches

##### *German Cockroach:*

The German cockroach is primarily peridomestic, distributed throughout the United States and spread exclusively through commerce, people and isolated mass migration. While found primarily indoors, individuals may also be found outdoors during the warm months in temperate areas (April-October) in weedy areas, rotting organic materials or garbage. Individuals, however, will readily migrate indoors if conditions are favorable (resources) and accesses are available. German cockroaches will breed throughout the year indoors, but favor a humid environment and an average temperature of 70F (21 C).



**Months Active: Year round. Active outdoor populations (April-October) may move indoors during the fall.**

##### *Brownbanded Cockroach:*

The brownbanded cockroach is distributed throughout the United States except in Vermont although it is expected to be there as well. This species is gregarious with preference for high locations. Will hide egg cases in dark, quiet high locations (upper portion of wall and on ceilings) but prefers cardboard. Does not have the same moisture requirements as the German cockroach and subsequently is found in drier locations. Individuals are active and readily fly when disturbed. Will fly around indoors as well as around exterior lighting. Often found where other cockroaches are not. May migrate indoors during cooler weather. Prefers temperatures over 80 F (27 C). Temperatures below 75 F (24 C) retards development.



**Months Active: Year round. Outdoor populations may move indoors during the fall (October-March)**

*Oriental Cockroach:*

A more temperate pest species of cockroach. It is not successful in tropical climates and in the United States is found rarely in sub-tropical/tropical regions where it probably can not reproduce. Prefers a temperature range of 68 F to 84 F (20-29 C) and exhibits cold tolerance to indicate that it can survive outdoors through temperate winters with access to food and water. Will tolerate hot, dry conditions if regular access to water is available. Does not fly. Common in damp, dark places and remains near preferred harborage sites (do not tend to migrate). Large numbers may be found in one mass around plumbing leaks. Likes damp places. Often travels through sewer pipes or may enter on product packaging.

Note: Smaller cockroaches (nymphs) tend to be numerous during summer months, less so during fall and winter.



**Months Active: Northern species. Active year round. May be found outdoors during temperate winters.**

*American Cockroach:*

Cosmopolitan distribution, one of the most common cockroaches found on ships. Additionally, commonly found in sewers, around pipes, or in any facility where food is stored or prepared. Usually hide egg cases in crevices or bury them in softwood or workable material (cardboard). Young American cockroaches are particularly fond of fermenting liquid. Adults will fly. They are active throughout the year where the temperature is 70 F (21 C) or higher. Temperatures of 15 to 20 F will kill them. There have been observations of American cockroaches surviving outside during the winter under certain favorable conditions, but tend to migrate indoors during the cooler months.



**Months Active: Year round when temperatures average > 70F. In northern areas, may migrate indoors during winter.**

*Smokybrown Cockroach:*

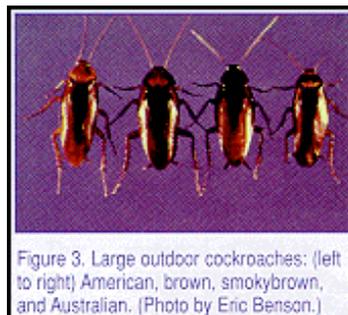
A major pest in the United States, particularly in the Gulf States. Outside the southeastern United States, it is only found sporadically in association with greenhouses or inside buildings where it may have been accidentally introduced. An exception occurs in southern and central California where outdoor populations have been observed. Will glue egg cases to surfaces and cover them with debris from the surrounding environment. Optimal development and reproduction temperature range is between 59 F and 95 F (15-35 C). This species has a greater tendency to lose moisture through the cuticle and thus requires access to liquid every two to three days. Individuals are tightly centered on habitats that can be described as protected, moist, dark, relatively warm and relatively free from desiccating effects of air flow which include voids in block walls, treeholes, canopies of trees, loose mulch, and soffits. Mostly found in structures with stable relative humidity. Populations are relatively immobile, being more mobile in the spring than fall. Primarily an outdoor species.



**Months Active: Year round. Primarily in Southern/Gulf States. Exception, southern and central California. Primarily outdoor species. May move indoors when temperature drops below 60 F.**

*Brown Cockroach:*

Well established in numerous states throughout the southeast, but will occur as far north as Columbus, Ohio and Philadelphia, Pennsylvania and as far west as Texas. It occurs indoors, as well as under the bark of trees and in sewers. Likes to feed on plant material. Brown cockroaches sometimes congregate at night indoors near garbage disposal areas. During the day they remain hidden outdoors under nearby vegetation.



**Months Active: Year round. Particularly in southeast. Will move indoors in northern areas when temperatures cool.**

## Ants

### Argentine Ant:

Distribution- This species is established throughout the southern states and California. It has become a serious pest in the Atlanta area. It occurs in Florida, but is not a serious pest. Isolated infestations have been reported from Arizona, Missouri, Illinois, Maryland, Oregon Hawaii and Washington.



Habits and Seasonality: Eggs are deposited throughout the year although the vast majority of egg laying occurs during the summer. In the spring, the nest will often be found in open ground with small piles of excavated earth a short distance from the nest holes. Form boards along walks and wooden objects of any kind are preferred nesting sites and permanent runways, as are crack and crevices in concrete walks. Ants may be encountered in enormous numbers in and under dead and decaying stumps. During warm weather they are partial to the under areas of buildings. Nests are commonly established inside buildings in wall voids and insulation.

Establish strong foraging trails. During the summer, most foraging occurs from 50 to 86 F (10-30 C) and trailing typically ceases on surfaces exposed to direct sunlight on days where temperature exceed 90 F (32 C).

Nests during the summer are usually very shallow, only 1 to 2 inches ( 2.5-5 cm) beneath the surface. Nests also occur among piles of wood and debris.

In autumn, the insects aggregate into a huge nest inside buildings. The Argentine ant has been found overwintering in enormous numbers in tunnels containing hot conduit pipes. In northern localities, this ant may be become established in buildings and spread from one to another, avoids the cold. In spring, the colony will disperse into smaller colonies around the original breeding site.

**Months Active: April-October in northern areas. Year round, southern distribution. Will migrate indoors when temperatures cool.**

### *Odorous House Ant*

Distribution- Common house-invading pest, being distributed widely throughout the United States from Canada to Mexico. It is especially common in the mid-south area of west Tennessee,

Arkansas and northern Mississippi, in mid to northern California. It is also found in certain areas of Oregon and Washington.



**Habits and Seasonality-**Workers forage tirelessly night and day. The ants especially like to invade buildings during rainy weather since their natural food supply, honeydew, is washed from vegetation. Breeding takes place continuously in suitably heated homes, but outdoors overwintering is completed by workers, dealate females and partly grown larvae. Workers commence foraging early in March (northern distribution) when temperatures warm until November.

Nests of this species are found in a great variety of situations, usually shallow and are often located beneath a board, stone walk, etc. A favored nesting site is between items that are stacked in a pile including lumber, firewood, bricks, cardboard and trash. Most interior infestations are the result of invasions by workers from outdoor colonies. Inside the ant may be found nesting in the walls, sills, or beneath the floor.

**Months Active: March-November in northern distribution. Year round, southern distribution. Will migrate indoors exposed to cool temperatures.**

### *Carpenter Ants*

Distribution-Throughout the United States.

**Habits and Seasonality-** Among the largest ants found invading buildings for foraging or nest-building. Colonies usually begin beneath a rock or in the soil, tree hole, in an insect-bored tunnel in a tree, etc. If conditions remain favorable, the colony thrives. When the nesting site is wood, it often resembles an ornate carving or galleries. The carpenter ant ordinarily excavates that portion of the wood softened by decay or by the attacks of other insects. These insects are able to withstand cold as they generate glycerol in their bodies whenever the temperature falls below a certain point. During the spring and early summer, this ant prefers protein but readily feeds on sugar-based foods beginning in July and lasting until winter.

Swarming of ants typically occur in late spring and early summer, depending on the species. Main colonies of carpenter ants are commonly located in trees surrounding an infested structure. Tree hollows, tree holes and dead limbs are the most common nesting sites. Satellite colonies may be found in similar locations in the same trees and in one or more neighboring trees. The main colony affecting a home will usually be located outside. Inside numerous satellite colonies will nest in a variety of voids and other sites including wall voids, hollow curtain rods, shower rods, hollow doors, behind dishwashers, under insulation, crawl spaces, attics, cabinets and ceiling voids.



**Months Active: Most activity during May-July. Outdoor colonies may remain active during temperate winters. Active indoors year round.**

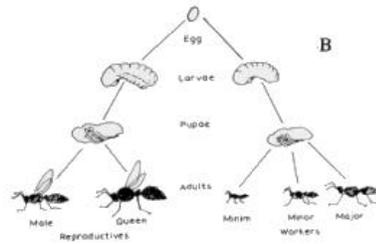
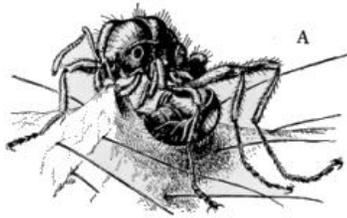
*Red Imported Fire Ant*

Distribution- The red imported fire ant inhabits 11 southern states from North Carolina through Texas. It is well established in parts of Tennessee.



Red Imported Fire Ant

Habits and Seasonality- Commonly nest next to and inside electrical appliances, such as air conditioners, heat pumps and traffic control boxes. They are voracious foragers and will exploit most any food source. This ant is attracted to oils. The red fire ant will build mounds in all types of soil except swampland and dense forest. The typical mound is a conical-shaped soil dome that measures up to 1-2 feet in diameter and 1.5 feet in height. During the hot summer months, mounds may not be maintained and may be small, scattered and easily overlooked. Mating (swarms) usually occur mid-morning one to two days following a rain if the day is warm (75 F) and sunny. The colonies are active year-round.



**Fire ant. A, Adult. B, Developmental stages. C, Mound.**

**Months Active: Year round.**

*Pavement Ant*

Distribution- The pavement ant is distributed in New England, through the midwest south to Tennessee and is found in California in the San Joaquin and Sacramento Valleys.

Habits and Seasonality- The pavement ant is a major structure invading pest found in the Northeast and Midwest. It is second only to the carpenter ant in homes in these regions and is the number one pest in commercial structures. These ants forage inside heated buildings throughout the year, although they are observed in the greatest numbers during summer. Activity on counters and around trash containers is most common. This ant derives its name from its habit of nesting beside and under sidewalks, driveways and building foundations. In areas where this ant is prevalent, any mound of displaced soil on or along a paved area is likely to be a pavement ant. The nests are outdoors under stones, along the edges of curbing and in cracks in the pavement, especially next to lawns. During the winter months, the ants often nest in buildings in a crevice in the immediate vicinity of a heat source.



**Months Active:** Year round indoors, particularly during the summer. Winter months will migrate indoors in temperate areas.

#### *Pharaoh Ant*

Distribution- The pharaoh ant is distributed worldwide. In the United States, it is most common in southern areas and parts of California, and is a pest of both home and commercial structures. In northern states, home infestations are rare while sightings of this ant in commercial buildings and apartment complexes is increasing.



Habits and Seasonality-The pharaoh ant is opportunistic in its selection of nesting sites. In domestic situations, nests of pharaoh ants are found in any crack or crevice which has a suitable microclimate. In buildings, nests are typically located in warm, moist areas such as heating pipes, radiators, sinks, drains and toilets. In the United States, the pharaoh ant is primarily an indoor pest, but it may be found living outdoors in southern states such as Florida and southeast Texas. Nests outdoors are usually found in piles of lumber, inside retaining walls, inside voids of patio furniture, under roofing shingles, in leaf accumulations. Failure to address outdoor colonies will lead to failure indoors. These ants are most active during evening hours. Trails often are hidden behind baseboards and cabinets. Workers tend to follow corners and edges. Most commonly found trails along wiring and pipes. Outside pharaoh ant trails are commonly seen around windows and doorways following along edges of bricks or siding.

**Months Active:** Year round, mostly indoor pest. Outdoors, south and southwest to Texas, year round. During cooler periods, will migrate indoors.

#### *Crazy Ant*

Distribution- In the United States, common in Gulf States and Arizona. Further inland, reports of this ant are sporadic. This species likes to nest in the soil of potted tropical plants and potentially in recyclable items (plastic, cardboard).

Habits and Seasonality- The crazy ant derives its name from its movement-appearing to run about aimlessly with no easily discernable trail. The crazy ant is unresponsive to most commercially available baits and satellite colonies are often difficult to locate and treat inside buildings of complex construction. Highly adaptable and opportunistic in its nesting habits. Outside, it is a soil-nesting ant which excavates shallow galleries under stones, boards, patio blocks, firewood, etc. Crazy ant colonies are commonly located within landscape mulch and

behind thick vegetation. Inside, colonies are found within wall voids, under carpeting and in potted plants. Will migrate inside during cooler months in temperate areas.



**Months Active: Year round inside and outside. Common in Gulf States and Arizona**

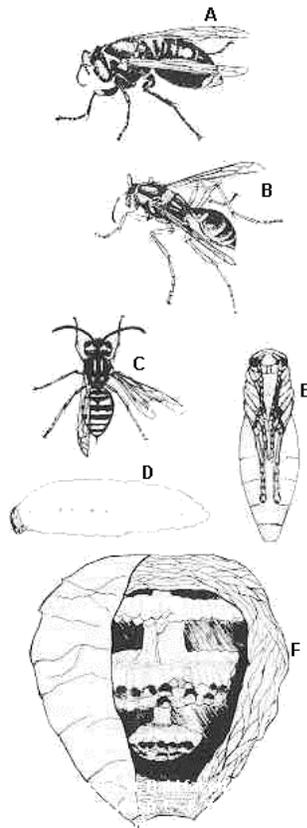
Hornets and Yellowjackets:

Distribution- Throughout the United States.

Habits and Seasonality- The European and Bald-faced hornets and the yellowjacket are the most important structure infesting wasps. These beneficial social wasps live in colonies which number thousands of individuals and would not be a threat to people except for their opportunistic behavior of nesting in structural voids, attics and cavities associated with landscaping features. They scavenge in trash receptacles and forage in gardens, farms, and vineyards. In the autumn, when outside temperatures cool, food becomes scarce, nest population and expansion is the greatest and newly emerged wasps seek warmth and light invading structures. Colonies of these wasps are not generally noticed until late summer and fall.

Mated female wasps frequently overwinter inside structural voids as the layered effect of structural components offer security against most predators and protection from exposure to the elements. These insects begin to seek out overwintering sites in September and will leave those sites permanently during April or May in the temperate regions. Unfortunately, overwintering wasps become pests because; (1) mobilize every time the temperature reaches their activity threshold, which occurs during sunny, abnormally warm fall and winter days and (2) move in the direction of warmth and light, often heading indoors instead of outdoors.





Wasps. A, Bald faced hornet.  
 B, Paper wasp. C - F, Yellow jacket.  
 F, Nest with carton cut away

**Months Active:** Generally most active late summer early fall. Overwinter inside starting September, will leave indoor sites starting in April. May venture outdoors during the winter during warm periods.

#### Stored Product Pests

##### *Granary Weevil*

The wings of the granary weevil are useless for flying. Primarily found where grain is stored and is mainly transported by people. Does not cause field infestations. The adult is resistant to cold and will successfully hibernate during winter months, resuming activity (egg laying) in the spring. Cannot complete its developmental cycle in consistently warm tropical regions. Has become established in temperate regions and in cooler areas of the tropics. The entire life cycle extends for 40 days during the summer to 150 days during the winter.

**Months Active:** Primarily temperate species outdoors, most active from early spring through fall. Indoors, active year round.

##### *Rice Weevil*

Often described as the most destructive grain pest in warmer regions, the rice weevil is world wide in distribution, generally abundant everywhere: regularly occurs in cooler temperate regions on imported products. This species is able to fly well and will readily migrate to new food sources. The female may deposit eggs at any time of the year, although sporadic during the

winter. The optimal conditions for weevil activity are 80-86 F, 75-90% humidity. The weevils may live up to 6 months. In the south, the weevils overwinter in the field.



**Months Active: Outdoors from early spring through fall. Primarily a pest in the tropics although found in temperate regions. Indoors, year round.**

*Lesser Grain Borer*

Although typically a tropical species, this cosmopolitan beetle is present throughout the United States and southern Canada, particularly in heated areas during the winter. Adult lesser grain borers are long-lived and strong fliers. Average development is about 55 days although may be reduced to about 30 days during warmer summer months.



**Months Active: Primarily a tropical species where it is active year round outdoors, in temperate areas, outdoors most active early spring through fall, indoors year round.**

*Drugstore Beetle*

The drugstore beetle is a common pest of the home and warehouse with a worldwide distribution. It will infest just about anything including foodstuffs and non-food items. About four generations are produced in fairly warm temperatures, about one generation in cooler temperatures.



**Months Active: Indoors year round. Outdoors, spring through fall may hibernate during winter or move indoors.**

*Cigarette Beetle*

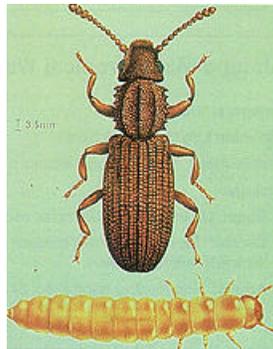
This cosmopolitan species primarily infests tobacco but will feed on a variety of products including rice, raisins and seeds. The adults are strong fliers, often observed flying on late afternoons or dull cloudy days above 65 F. In temperate climates, the beetles usually first swarm in May and then again in August. Winter is usually passed in the larval stage. Fourth instar larvae have been known to survive at 45 F. At about 60 F, larvae will become dormant and may hibernate. In warehouses, activity occurs year round.



**Months Active: Outdoors in temperate regions, activity begins in May, winter passed in hibernation. Indoor activity year round.**

*Sawtoothed Grain Beetle*

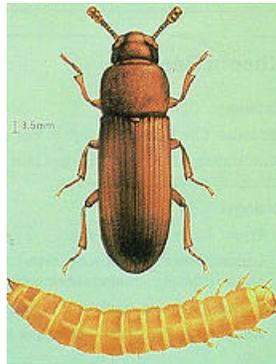
The sawtoothed grain beetle is cosmopolitan in distribution. It readily penetrates packaged foodstuffs. The optimum temperature for development is between 86 and 95 F. In general, development is more rapid at higher humidities. Adults may survive more than one year. The insect will cease breeding during winter months unless the building is heated and moisture conditions are satisfactory. Since most heated buildings are fairly dry, little or no breed takes place, but the adults remain active.



**Months Active: Outdoors in temperate regions, late spring through early fall. Tropical areas, year round. Indoors, year round.**

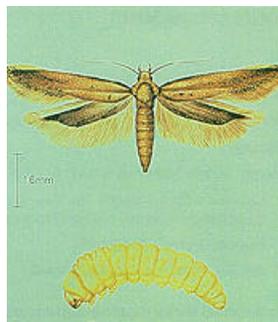
### *Red and Confused Flour Beetle*

These beetles are cosmopolitan in distribution. The red flour beetle is essentially an insect of warm climates whereas the confused flour beetle occurs commonly in the northern or temperate parts of the United States. These flour beetles are omnivorous and extremely important pests of flour. The adults of the red flour beetle may fly short distances, but the adults of the confused flour beetle, although with wings, have not been observed to fly. They are capable of breeding throughout the year when buildings are warmed during the winter, but only adults are found inside unheated buildings. The adults may live for more than 3 years. The life cycle varies with environmental conditions. The number of larval instars range from 5 to 18. The life cycle may be completed within 7 weeks but may require more than 3 months.



**Months Active: Red Flour Beetle-Normally a tropical species outdoors active year round. Indoors active year round. Confused Flour Beetle- Temperate species active from spring through fall. Indoors, active year round.**

Angoumois Grain Moth- This cosmopolitan moth is considered an important pest of stored grain and is often active during the winter at low temperatures. The life cycle during warm seasons require 5 to 7 weeks, whereas during the winter, the larvae remain dormant for four to five months resulting in a total development time of 6 months or more.



**Months Active: Tropical distribution, year round; Temperate outdoors, usually early spring through late fall or early winter. Indoors, year round.**

### *Indian Meal Moth*

This cosmopolitan species infests a variety of foodstuffs and is a common pest in warehouses and grocery stores. Outdoors, the insects start the year with a brood of overwintering larvae, which pupate mostly in March and emerge in April. Indoors, development proceeds at temperatures in the range of 64 to 95 F and can be completed in about 30 to 60 days.

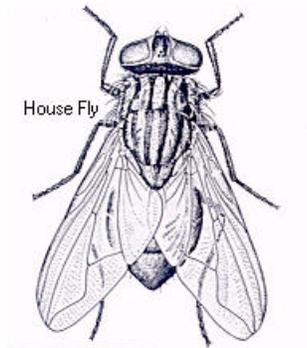


**Months Active: Temperate distribution outdoors, most active from March through October/November. Tropical year round. Indoors, year round.**

### Filth Flies

#### *House Fly*

Cosmopolitan in distribution. This fly commonly breeds outdoors in materials that are decaying. In northern climes, the housefly over winters in a semi-dormant state outdoors, although breeding/activity will occur in warm places/days when food is available. In southern areas, the fly is active at all times. Continuous breeding occurs indoors.



**Months Active: Temperate regions, potentially year round, most activity from March through October. Indoors, year round. Tropical regions-year round.**

## SEASONAL ACTIVITY SUMMARY

<b>Pest</b>	<b>Area</b>	<b>Site</b>	<b>Months Active</b>	<b>Migratory</b>
<b>Rodents</b>				
Roof Rat	All areas of US	Indoors	Year round	No
Roof Rat	Coastal areas	Outdoors	March-October	Indoors during cold
Norway Rat	All areas of US	Indoors	Year round	No
Norway Rat	All areas of US	Outdoors	March-October	Indoors during cold
House Mouse	All areas of US	Indoors	Year round	No
House Mouse	All areas of US	Outdoors	March-October	Indoors during cold
<b>Birds</b>				
Sparrow	All areas of US	Outdoors	Year round	Semi-during winter
Crow	All areas of US	Outdoors	Year round	Yes, N to S winter
Pigeon	All areas of US	Outdoors	Year round	No
Starling	All areas of US	Outdoors	Year round	Semi- N to S winter
<b>Cockroaches</b>				
German	All areas of US	Outdoors	April-October	Move indoors winter
German	All areas of US	Indoors	Year round	No
Brownbanded	All areas of US	Outdoors	April-October	Move indoors winter
Brownbanded	All areas of US	Indoors	Year round	No
Oriental	Temperate areas	Outdoors	Year round	No
Oriental	Temperate areas	Indoors	Year round	No
American	All areas of US	Outdoors	Year round >70F	Move indoors winter
American	All areas of US	Indoors	Year round	No
Smokeybrown	Gulf States/CA	Outdoors	Year round	Indoors below 60F
Smokeybrown	Gulf States/CA	Indoors	Winter	No
Brown	Mostly Southeast	Outdoors	Year round	Indoors when cool
Brown	Mostly southeast	Indoors	Winter	No

<b>Pest</b>	<b>Areas</b>	<b>Site</b>	<b>Months Active</b>	<b>Migratory</b>
<b>Ants</b>				
Argentine	South/CA	Outdoors	April-October=North Year round=South	Indoors winter
Argentine	South/CA	Indoors	Year round/high winter	No
Odorous	All areas of US CA/MS/AR/TN	Outdoors	MAR-NOV=North Year round=South	Indoors winter
Odorous	All areas of US	Indoors	Year round/high winter	No
Carpenter	All areas of US	Outdoors	May-July/Active winter in temperate areas	No
Carpenter	All areas of US	Indoors	Year round	No
Fire	Southern US/TX	Outdoors	Year round	No
Fire	Southern US/TX	Indoors	Year round	No
Pavement	New England/ Midwest/ CA	Outdoors	APR-OCT-temperate Year round-southern distribution	Indoors winter
Pavement	New England/ Midwest/ CA	Indoors	Year round/winter	No
Crazy	Gulf states/AZ	Outdoors	Year round	?/colder months
Crazy	Gulf states/AZ	Indoors	Year round	No
Hornets/ Yellowjackets	All areas of US	Outdoors	Late summer/early fall	move indoors starting SEP
<b>Stinging</b>				
Hornet/ Yellowjackets	All areas of US	Indoors	Start SEP	May move out in winter during warm periods

<b>Pest</b>	<b>Areas</b>	<b>Site</b>	<b>Months Active</b>	<b>Migratory</b>
<b>Stored Product Pests</b>				
Granary Weevil	Temperate	Outdoors	Early spring-fall	During winter
Granary Weevil	All areas of US	Indoors	Year round	No
Rice Weevil	Southern US maybe some temperate	Outdoors	Early spring-fall	During winter
Rice Weevil	Southern maybe some temperate	Indoors	Year round	No
Lesser Grain Borer	Southern Temperate	Outdoors Outdoors	Year round Early spring-fall	During winter During winter
Lesser Grain Borer	All areas of US	Indoors	Year round	No
Drugstore Beetle	All areas of US	Outdoors	Spring-fall	During winter
Drugstore Beetle	All areas of US	Indoors	Year round	No
Cigarette Beetle	All areas of US	Outdoors	May-fall	No
Cigarette Beetle	All areas of US	Indoors	Year round	No
Sawtoothed GB	All areas of US	Outdoors	Temperate-late spring -early fall/ Southern YR	During winter
Sawtoothed GB	All areas of US	Indoors	Year round	No
Red Flour Beetle	Southern US	Outdoors	Year round	Cooler periods
Red Flour Beetle	All areas of US	Indoors	Year round	No
Confused FB	Temperate US	Outdoors	Spring-fall	Winter
Confused FB	All areas of US	Indoors	Year round	No
Angoumois GM	Tropical Dist. Temperate Dist.	Outdoors Outdoors	Year round Spring-early winter	No No
Angoumois GM	All areas of US	Indoors	Year round	No
Indian Meal Moth	Tropical Dist. Temperate	Outdoors Outdoors	Year round MAR-NOV	No Winter
Indian Meal Moth	All areas of US	Indoors	Year round	No
<b>Filth Fly</b>				
House fly	All areas of US	Outdoors	Tropical-Year round Temperate-MAR-OCT	Winter
House fly	All areas of US	Indoors	Year round	No

## **PEST IDENTIFICATION KEYS**

## **DOMESTIC RODENTS**

## **BIRDS**

**COCKROACHES**

**ANTS**

## **STINGING INSECTS**

## **STORED PRODUCT PESTS**

## **FILTH FLIES**

**QUICK REFERENCE**  
**Seasonal Activity Summary**