ALASKA PIONEER FRUIT GROWERS NEWSLETTER

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Association News

We have several gatherings happening over the next month or so. The first will be ***our next Orchard Tour*** held out at Gene Dinkel's in Wasilla on Monday, August 19th at 7pm. Gene has a long established orchard protected by an electric moose fence. Carpooling is recommended. To get there, take the Parks Hwy about 2.5 miles to Fairview Loop Rd. on the left (this is a T intersection). Drive to the mile 5 sign on the *left* of the street (if you reach one on the right, you've gone too far) and take the driveway to the end. There are two houses here, and the Dinkel's is on the right. After visiting the Dinkel's, we will move on to Dan Elliott's for refreshments and a tour of his orchard progress. What were three open trenches in spring of 2000 are now rows of closely spaced trees beginning to fruit. To get there from the Dinkel's head back along Fairview Loop Rd about 100 yards, just past Jackson Court, and take the driveway on the right (same side of the road as Dinkel's.)

On Tuesday, September 10th from 6 to 9:30 PM, Lawrence Clark is hosting an apple pressing with his new Correll Apple Press. Bring your own apples and containers (plastic milk jugs work well.) He has an electric grinder, and you do the work on the press to make your own cider. This is an easy way to use and store your harvest, as you can freeze the cider for later. To get there, take the Seward Highway south to the Rabbit Creek Road exit and take it toward the mountains. His place is on the right, 3200 Rabbit Creek Road. *There will not be reminder cards mailed for this event, so mark your calendars now!*

Finally, I would like everyone to plan on attending the Annual Apple tasting, which will be once again hosted by the Bradley's out in Peter's Creek at the end of September. Save a few of those beauties (not just apples - other fruit is welcome!) to share and compare.

If you have any suggestions for the winter meeting topics, let Dan Elliot know. We welcome anyone who might want to teach us something on gardening, or has some pictures to share of their garden or others. Or if you want to learn about something specific, let Dan know, and he will try to find someone to teach us!

Treasurer's Report

by Alice Brewer

A total of $438 was received at the Apple Grafting in April. Of this amount, $100 was donated by Lawrence Clark - thank you Lawrence! We welcomed new member Brian Hilmes of Anchorage. $290 was received from the sale of root stock and scion wood. Checks were issued to Dan Elliot for expenses in photocopying material for the workshop, and to Debbie Daniels for scion wood she brought in. Some suggestions were made for next year's grafting workshop. More publicity - either a feature story or at least a note in the Community Datebook.

Hardy kiwi a potential crop for northern growers

By Mary and Bill Weaver
Pennsylvania Correspondents

David Jackson has devoted 12 years of his time and energy to the hardy kiwi. His base of operations for research and development is in Danville, in Northumberland County, in northeastern Pennsylvania.

The hardy kiwi, according to Jackson, differs in several respects from its fuzzy cousin, found commonly in grocery stores. Hardy kiwi have smooth skins, and so don't need to be peeled before eating. They are the size of a large grape to a small plum, and are sweeter than their better known cousins. In addition, the vines can take temperatures to -20° F., and need 200 hours of chill at 38°F or lower before they will bloom and fruit, making them a potential new crop for northern growers.

Hardy kiwi are also nutritional powerhouses, with 10 times the vitamin C of citrus, and high amounts of potassium and vitamin E. They are bothered by few pests and diseases. "We get a few bird pecks," said Jackson. "Deer can be a problem in areas with few forage crops. And Japanese beetles can be a problem with drought-stressed plants. Irrigated plants, though, can readily outgrow Japanese beetle damage, which is limited to the leaves."

Half of the 12 acres at Kiwi Korners devoted to hardy kiwis are for research and development, and half are for production. "Growers can come and visit and get some hands-on experience here," said Jackson. "If you're interested in growing the crop, it's a good way to find out about system design and different cultivars."

Jackson also grows pawpaws, ginseng, and strawberries, but, he says, "Kiwi is our forte, has been for quite a long time, and will be for the long haul."

Hardy kiwi first came to the United States on clipper ships in the late 1800s from China, Japan, Russia, and Korea. They were planted in arboretums, and remained a curiosity for decades. "There are less than 100 acres in the U.S. of commercial production, and only about 15 acres in New Zealand, and 10 acres in Italy and Japan," said Jackson. "The research and development has not been put into the crop yet." Kiwi Korners is currently conducting research toward risk minimization for new growers.

Kiwi Korners now has 50 different cultivars on-site from all over the world, procured from native habitats, nurseries, growers, arboretums, and seed companies. "We're testing them to see how often, and how well, they produce in Pennsylvania," said Jackson, "and to see how best to market the different varieties."

In kiwis, male and female flowers are found on separate plants, and research is complicated by the fact that many varieties available from nurseries are misnamed as to sex and variety. "With kiwis," said Jackson, "you don't know for sure what sex or variety a given plant is until it starts flowering when it is six to eight years old."

Jackson is currently working on genetic markers that will positively identify both the cultivar and sex while the plants are still young. "We're currently working with the help of SARE on a research study entitled 'Hardy Kiwi Pollination and Production,' focusing on male cultivar vigor, flower dates, pollen viability, and female production rates," commented Jackson. "We need to match up the flowering dates in the males with those of the female varieties. At this time, nobody knows what the pollen viability is in specific male cultivars."

In choosing a location for growing kiwi, growers must keep in mind that most kiwi cultivars don't like wet feet. Choose well-drained soil. "Up on a hill a bit can be good," said Jackson. "We like some wind protection too."

Before planting kiwi, Jackson first plants a cover crop of clover or oats to replenish the soil. After the cover crop is turned under, a ridge or raised bed is made for planting with a one-bottom plow. "Aisles between the rows are planted with a low-grow fescue, as it will take the traffic, prevent erosion, and assist in moisture retention," said Jackson.

Next, posts for the T-trellises are pounded in. Kiwi Korners' trellises are top quality, "and we can pass them down to the next generation," commented Jackson. "They should last 40 to 50 years. The kiwi plants themselves have been documented to the age of 60 years."

In addition to treated posts, wire with a tensile strength of 230,000 pounds is used. "It doesn't cost much more than ordinary galvanized wire," said Jackson. "If the wire stretches and sags, you can have a difficult situation to work with." T-trellises are used because the fruit is easiest to find and pick when it's growing on the shoulders of the trellises. Kiwi Korners uses a five-wire trellis. Proper height of the T-bars is important. "At seven feet, you need ladders. At six feet, you can't walk upright," he commented. So Kiwi Korners has settled on 6 l/2 feet as a good height for the Ts.

Rows are spaced l5 to l6 feet apart, and plant spacing within the rows varies from l0 to l7 feet. They are still experimenting with spacing. "Nobody has yet pushed a lot of these cultivars as far as they will go," said Jackson. "Before you buy mowing and tillage equipment," he continued, "think very carefully about the space you have to work in. You don't want equipment that will damage the fruit hanging on the T-ars, for example. We maintain our planting with hand pruning and a modified grape hoe. We do not use herbicides."

After spending three years in a nursery bed spaced two feet apart, where the young plants are easier to care for, the kiwis are moved to their permanent positions. They are irrigated with micro-sprinklers, which are attached to the middle T-bar wire. Jackson suggests rows no longer than 480 to 500 feet because it's much easier hydraulically for the irrigation.

"The droughts we've had recently have been the main hindrance to the development of this crop in Pennsylvania. They've been devastating, actually. We have enough water to keep the plants alive, but not enough for full production. We really need another well, and more mulching would also help. When it's really dry, the fruits hang on, but the leaves drop, and then you don't get the next year's fruiting canes."

Because of their limited water supply, Kiwi Korners is considering going to a wind machine or some kind of heat source for frost protection instead of sprinkling. Jackson has found that after frost, some cultivars will reflower.

The basic pruning method at Kiwi Korners is single trunk system. "This is very important," commented Jackson. "The plants will start to fruit up to two years earlier with a single trunk than they do with multiple trunks. Also, multiple trunks produce too dense a canopy that is undesirable for arbor management."

Pruning is done twice a year. "Right after flower set, we take out canes, so we don't get too much of a double canopy. Then pruning is done again in the fall. It's important not to prune too close to spring, or the plants will bleed," cautioned Jackson. "We're always pruning for next year's fruit," he continued. "Pruning directly affects fruit size, and we want the fruit on the shoulders of the T-bar where they are easy for the pickers to find. Plus, if

you allow too much vegetation, that may lead to biannual fruiting. Also, we try, in our pruning, to separate each plant."

Kiwi Korners has been fortunate to find a sale for their pruned canes. A wreath company buys them for 25 to 50 cents a pound. "It gives us some money for fertilizer," commented Jackson.

The use of bees to pollinate kiwis can be difficult. It is necessary for a bee to visit a male flower first to carry its pollen to female flowers. Kiwi Korners sometimes puts pollen in the hives, so the bees will contact it before going to forage, taking some pollen grains along with them. They have also used rose dusters and other applicators to put the pollen right onto the female flowers.

"The male flowers are usually good for about 3 days," said Jackson, "and the females for about 7 days. When a flower has been fertilized, within 48 hours, the anthers will darken, the petals will push back, and the actual fruit itself turns from a yellowish to more of a greenish color." Both sexes start flowering at the beginning of June in their location.

The fertility program at Kiwi Korners consists of natural materials. "I could recommend compost on raised beds, leaf mulch, and rock phosphorus," said Jackson. "We've had to learn the hard way. Plants can be killed by too much nitrogen. But the plants are very easy to fertilize, since the roots are so close to the surface."

"Kiwi can be harvested simultaneously with each hand, by snapping the individual fruit stems from the spur and placing the fruit in a picking bucket," said Jackson. "On occasion, the stem will pull away from the fruit. In this case, it is not included with the harvest due to ethylene causing the rest of the fruit to ripen early."

Time to harvest is determined by the level of "brix", or residual sugars, in the ripening fruit. "We pick at 9 to 11 brix," explained Jackson. By the time the fruit have "cured", they will be ripened to about 21 brix when they get to the store shelf. "If you wait to pick until a higher brix level, there's a greater chance the stem will pull off the fruit." A picker can pick about 20 pounds of hardy kiwis an hour. Then the harvested fruit is put in a walk-in cooler to cure naturally for 2 weeks.

On the West Coast, a different harvest system has been used. Out there, they pick at 6.5 brix, when the fruit are rock hard. "Then they hold the fruit in a CA room and ripen them with ethylene," said Jackson. "The customers did not like the resulting fruit. We find it more advantageous to let ours cure naturally, which produces a longer shelf life and a higher nutritional value."

Kiwi Korners started marketing their kiwis 3 years ago under the name "Kiwi Berries." In upscale grocery stores and natural food stores, they sell the kiwis packed in 6-l/2 oz. clam shells, where they sell for $l.99 to $2.99 each. Their label says "Naturally Grown," rather than "organic," even though they use no pesticides. The clamshells are marketed through HortiFruit in Florida, which is based in Santiago, Chile. The fruit are shipped from Maine to Texas. "Our biggest problem is getting more growers," said Jackson. " We have the marketing for the product, but without more product, we can't get the whole thing going to maintain the market."

A second way the hardy kiwis are marketed is through farmers' markets, where they are sold in half pound or pound -size fiber containers at a lower price. The fruit is picked at a higher brix for these markets.

Some of Kiwi Korners' fruits are also sold as puree. They move one to two tons of puree a year. "After the fruit has had one or two frosts, we strip the vines of the remaining fruit for

puree," said Jackson. "We've been experimenting with uses for it. A company near State College is marketing value-added products made with our "Kiwi Berries." Since the brix is so sky-high, we would like to get wineries involved. We also make jams, sauces, and marinades. "Also, kiwi is the world's greatest meat tenderizer. Put two spoonfuls on steak overnight," said Jackson, "and you have baby food in the morning."

Jackson is working with several particularly interesting cultivars. One is a sport plant brought to Kiwi Korners from a Virginia test site. "It has a shelf life of up to 30 days, and a very high brix - 3l brix. It tastes like a super-sweet melon ball," commented Jackson. Another cultivar, Jumbo Royale, is from Michigan State University, and has a very large fruit for a hardy kiwi, the largest in their collection. "It's a two-bite fruit," said Jackson. "It's very low acid, with a flavor like a cross between banana, strawberry, and kiwi." A third is a red -on- red cultivar from New Zealand with red skin and red flesh. "This variety is also being test trialed on a 40-acre island site in the middle of the Susquehanna River due to the moderated temperatures and water availability," said Jackson. "Kiwi Korners' focus is the development and promotion of multi-cultivar hardy kiwi as an alternative, sustainable fruit crop and to facilitate information between academia, growers, and the market place," said Jackson. "We are available for consultation and on-site visits with emphasis on teaching growers about kiwi cultivation, including site evaluation, complete system design, cultivar evaluation, and niche marketing. Please contact us for further information at (507) 275-878l, email at kiwikrnr@sunlink.net, or visit our web site at www.kiwiberry.com."

At War with Voles and Fungi

by Tom Marshall

During the spring of the Year 2002 an army of voles invaded the orchard on my homestead west of Wasilla, Alaska. They were probably attracted by the white clover in the lawn surrounding the trees. The invaders girdled 6 trees killing them outright and severely retarded 6 more trees. Unfortunately, one of the vole destroyed trees was a 5 year old Oreole Apple growing on a Ranetka root showing some nice fruit buds. I had hoped to surprise the skeptics who doubt that an Oreole Apple really will bear fruit at in place other than on the South side of a home in Anchorage.

Originally I blamed the big snow shoe hares that are often seen loping through the orchard because I could not picture a 1" high vole ating bark off of a fruit tree trunk to a height of 30". After I discovered a girdled tree, which was completely protected from rabbits by 1" mesh chicken wire, the voles emerged as the guilty party. Apparently the voles took advantage of a 30" Saint Patrick's Day snow fall to gain access above the plastic tree wrap. Once they got a taste of the bark they ate their way downward chewing up the white stretched tree wrap as they went.

Before I found the bark destruction on the rabbit protected trees I was sure that Bugs Bunny and his relatives were the culprits. I offer all rabbits in the Matanuska Valley my sincere apologies for the curse words that I used towards them and retract all statements about making hasenpfeffer out of any and all of them who ventured into the sights of my shotgun. This winter all of the trees will be protected by 3' high wire screens.

The plum crop for the summer of 2002 is another story. The self fertile Opal grafts which produced 50 lbs of ripe tasty plums last summer will probably produce less than 1 pound this summer. Part of the problem seems to be a foot long fungus which grew undetected on one of the main grafted branches last summer resulting from a longitudinal split due to the stress of supporting the heavy fruit load. This cannot be the only explanation because fruit production from all Opal grafts is way, way down. The Opal branches looked really dead earlier this summer but they now have a few small new growth branches.

Fortunately the grafts of other plums on the same large Manchurian plum root stock tree itself is bearing heavily for the first time in its 12 year life. Hopefully it will be pollinated by it's now blooming Green Gage and South Dakota plum grafts or a nearby American seedling plum. A potted Opal plum on a Myroban root is acting strangely this summer. At this writing, July 24, it has 25 leaves and 25 green plums the size of large stuffed olives. One branch has 8 plums but has never grown a leaf! If it was possible to turn time backward I would have picked all but a few of the small plums.

I believe plums are more difficult to graft than apples. The irregular diameter and tapers of the older wood makes for a difficult cambium layer match, but can produce successful grafts. Once the tree starts bearing, it seems to work at growing fruit rather than making new growth. The small diameter of first year wood is difficult to handle for grafting. Pruning should be done in the winter to lesson the chance of introducing disease.

Nevertheless, plums are a very tasty treat about September 1st. With the right pollination, early season pollinating insects and a large helping of luck the rewards can be fun and interesting. Hope springs eternal in the heart of the Alaskan fruit grower.

Orchard Reports

by Tami Schlies

We got to see the wonderful acreage of Larry and Judy Wilmarth out in South Anchorage in July, and she gave us some notes I thought I would include in this issue. They have a huge greenhouse where they keep some of their potted fruit plants in the winter. They also had interesting planter boxes for the trees, lined with 2 inch styrofoam for winter protection. These plants bear fruit before the outside plants even bud.

November 5 to February 5 they did not heat the greenhouse, and kept temperature records during that time. The lowest temperature was 10 degrees, with an average of about 25 degrees. They wanted to let it get cold enough to kill most of the foreign bugs imported. Judy said that in the summer, even with the fans on and the huge doors open, it got up above 110 degrees, and so they do not grow much in there in the summer. At the tour, they had some grape vines with fruit, and pumpkins etc. inside the greenhouse, but that was all.

Some successes they have had are Kirsten and Sam cherries, budding March 24. Kiwis, apricots, and Mountain Ash budded by April 3. By April 10, asian pears and the mountain ash Shipova started budding. Sungold apricots had fruit by May 10, and the outside cherries in pots started budding. In the greenhouse, small plums came out on the Mount Royal trees by May 13. The only failure I know about was the Princess Kay plum planted outside in 2000 that

died, though I think there was more that got cut off on the handout I was given.

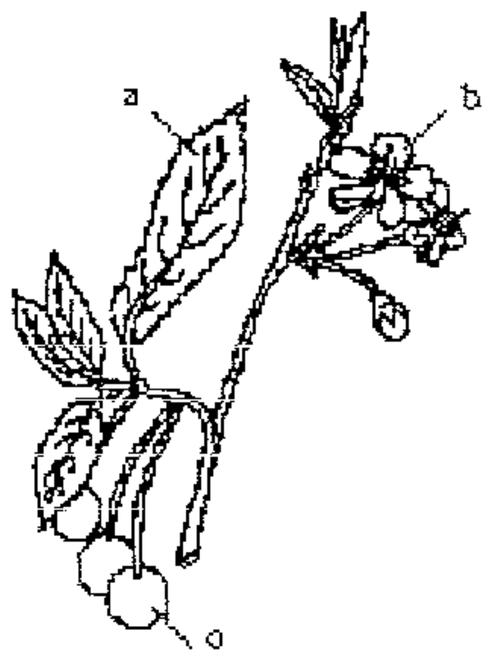
My own orchard here in Peter's Creek took vole damage this year on my potted plants. That's what I get for laying them down so close to the compost pile, I guess. I lost one of my silken trees altogether, and others I thought were going to be fine are now showing signs of stress I am sure are a result of bark damage. They just can't take up enough water in the heat this year. Winter will cull them, I figure. I did get three grafts to take from the silken that was damaged, so we'll see how it does on several rootstocks.

After the spring of terrible mosquitoes, the summer brought a large number of yellow jacket nests to my neighborhood. We destroyed five in my yard alone, and the neighbors also removed several from their properties. Though I am alergic to bee and wasp stings, I do not mind a few in my garden (bees not nests!) Big bumblebees buzz happily through my poppies early in the morning before the dew has even cleared, humming almost like content cats. Honey bees sip at the clover throughout the yard, for some reason never bothering barefoot kids. Even the yellow jackets serve a purpose - I have watched with fascination as they hunt small flies or leafhoppers in the garden, catching and stinging with amazing speed and then flying away with their load. Have you ever seen the efficiency with which they can cut a chunk of meat off your salmon or game scraps and carry it away? They do the same to my strawberries later in the season if I do not pick the berries before they turn fully ripe. Sigh. To my dismay I got stung out of nowhere (a hidden nest up among and behind my runner beans) at the beginning of a beautiful day of sun in late July. No more gardening for that day, since I only had one sting kit. I was sure it would be the last sunny day of the season, but we were blessed with many more between now and then! I have included a handout on yellow jackets in this issue for anyone else interested.

I got a second row of trees planted, and hope to move the chicken pen to encircle the new orchard. They will definitely keep the grass from competing for moisture and nutrients, and add their own "nutrients" as well. I am hoping they can also eliminate pest problems before they appear.

I have been using organic fertilizers exclusively for three years now and am very happy with the results. My trees are so green and thick, and the new grafts are stocky, 2 1/2 foot trees now. I use a fertilizer especially for fruit trees that includes extra boron, which is supposed to make the fruit sweeter, so we will see at the tasting this year. I am also adding micchorhizae during planting this year, and will report on any difference I see next year.

The new plastic limb spreaders I got from Garden's Alive! are working very well. They allow me to use them on almost any branch length, are not too heavy, do zero damage to the tree, and are so easy! I even used one on a new whip that was crooked and kind of bowed to the ground at an unpleasant angle when I planted it. The limb spreader was just the right size to prop the tree up until it stabilizes itself. The only complaint I have is that they are very white, and so really jump out at you when you look out at the orchard. Did any of you use a product this year you might like to comment on? Let me know so I can share with our members.



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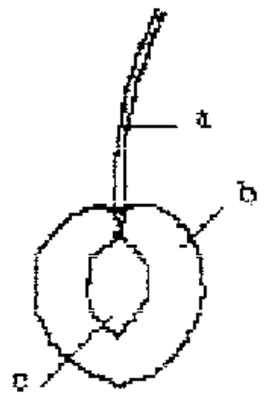

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Featured Fruit

Cherry Prunus cerasus

Cherries occupy the *Cerasus* subgenus within *Prunus*. They are members of the Rosaceae family, subfamily *Prunoideae*. *Prunus avium* L. is the Sweet Cherry, and *Prunus cerasus* L. the Sour Cherry. *P. fruticosa* (ground cherry) and *P. pseudocerasus* (Chinese cherry) are other minor fruit species. Cherries originated in Asia, but spread to Europe early on. Cherry pits have been found in the remains of prehistoric lake dwellings in Switzerland. The name Cherry dates back to 300 BC, after the Turkish town of Cerasus. In the 1600's cherries arrived in North America with the settlers. Cherry-trees are cultivated for their fruit (fresh, canned, served in syrup, jams, jellies, and liquors) and also for their wood, which is much valued in wood working.

Most cherries have been grafted onto a rootstock. Leaves are relatively large, elliptic with acute tips, petioled, and strongly veined. Flowers are white, with long pedicels, borne in clusters of 2-5 flowers on short spurs with multiple buds at the tips. The distal bud is vegetative and continues spur growth. Bloom occurs relatively late in spring, so frost is less of a hazard than for other stone fruits.

Maximum yields from sweet cherries are obtained beginning in the 5-6th year after budding, and trees are productive for 25-30 years, despite living much longer. Each spur is long-lived, producing for 10-12 years. Sweet cherries need cross pollination, while tart cherries are self fertile. Fruiting begins earlier for sour cherry trees, after 3-4 years, but productive life is shorter - only 20-25 years. Sour cherries are the latest blooming of the stone fruits, therefore are less frost prone to frost damage than sweets. 35-45% of the flowers are borne on 1-year wood, not exclusively on spurs as in sweets. Spurs are also shorter-lived on sour than sweet, gradually declining in productivity over 3-5 years. Sour cherries tend to be a bit more cold hardy overall.

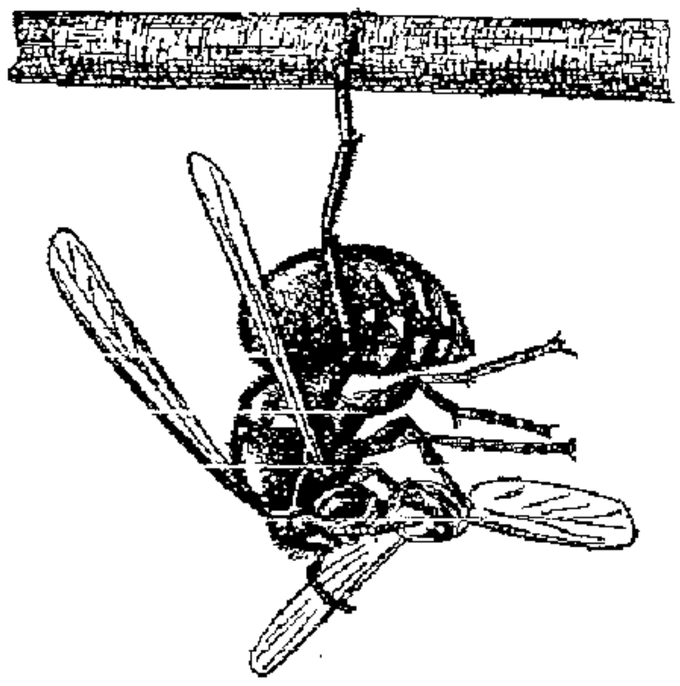
Wild and domestic cherries contain cyanogenic glycosides in leaves, bark and seeds. *P. serotina* is the most dangerous species in the Rosaceae. Children have been poisoned by chewing twigs, eating seeds, and making tea from leaves. All classes of livestock have been killed from eating ɜaves.

Fresh cherries are very nutritious. They are rich in Potassium, Vitamins A and C, Magnesium, Phosphorus, Folic Acid, Calcium, and even a bit of p rotein.

● ALTERNATIVES

SOLVING YELLOWJACKET PROBLEMS

BY POLLYANNA LIND



Yellowjackets are social wasps which are known, of course, for their painful sting. North America has nineteen species of yellowjackets, more than any other continent.[1] The most common in the Northwest are the western yellowjacket *(Paravespula pensylvanica)*, the common yellowjacket *(Paravespula vulgaris)*, the aerial yellowjacket *(Dolichovespula arenaria.)*, and the bald-faced hornet *(Dolichovespula maculata)*.[2]

Biology

Yellowjackets make two types of nests: nests below the soil in mouse burrows or similar sites (western and common yellowjackets), including inside walls of houses; and aerial nests in trees, in sheds, or under the eaves of buildings (aerial yellowjackets and bald-faced hornets).[3] The nest is started by a single inseminated queen that emerges during the spring after overwintering in a protected location.[3] Nests are generally built no more than 400 meters from a protein source or one kilometer from a honey source.[4] After selecting a site, she begins building a small nest and lays eggs.[5] Once these eggs hatch, the queen will tend the egg larvae until the first seven to ten workers emerge. Then the workers gradually take over most of the colony duties, including foraging for food and fiber, constructing more brood comb, feeding the larvae and queen, and keeping the nest clean. The queen rarely leaves the nest once the workers take over; her time is spent laying more eggs.[1,6]

Near the end of summer colonies start to decline and yellowjackets are more likely to sting. The yellowjackets that remain switch their diet from protein to sweets.[7] Also, new males and queens are produced in larger reproductive cells.[8] After the new queens and males emerge and mate, the males die and the inseminated queen seeks shelter for the winter.[3]

Usually the nest and colony are destroyed during the winter. In warmer climates, where prey populations can sustain a colony year round, a nest will survive the winter. These perennial colonies can become unusually large.[9]

Benefits

When most people think of yellow jackets, they think only of their ability to annoy and sting. While this is definitely part of their interactions with humans, yellowjackets are also important beneficial insects. They pollinate flowers, eat harmful insects and their larvae (i.e: coddling moths, flies, aphids, caterpillars), help keep leaves free of honeydew which can encourage fungi and ants, keep rotting corpses cleaned up, and possibly discourage field mice from living nearby.[4,6]

Identification

It is important to correctly identify yellowjackets because they look similar to some beneficial wasps.[3] If possible, take specimens to your county extension office or an entomologist for identification.

Preventing Stings

In the United States, approximately 40 deaths occur every year due to allergic reactions to yellowjacket stings.[10] Symptoms of an allergic reaction can vary, some examples are; hives, swelling, shock, respiratory distress, nausea, and in severe cases, loss of consciousness.[10] There is no way to know who will have an allergic reaction so it is always best to be cautious when in yellowjacket territory. People who are highly sensitive should considered a desensitizing procedures (immunotherapy) and consult their physician about emergency kits.[10]

To minimize the chances of being stung, always wear shoes, long sleeve shirts, and pants of a dull light color.[10] Avoid wearing perfumes, colognes, hairsprays, scented suntan lotion or deodorant, some bug repellents, or sweet-smelling cosmetics.[3,6,10-12] Be careful when drinking out of open drink containers.[13] If you are being bothered by yellowjackets, stay calm and move slowly away.

Extra precautions should be taken when disturbing a yellowjacket nest. Cover your hands with thick gloves and tape the shirt cuff over the top of the glove. Tuck your pant legs into a pair of thick socks and cover your head and neck with a bee keepers helmet and net.[10] If you are sensitive, consider having someone else disturb the nest. When disturbing a nest or a colony, it is always best to do at night when it is cool and dark outside and the yellowjackets are more docile. Placing a red piece of acetate film over your flashlight lens allows you to see the yellowjacket nests at night without disturbing them with direct light.[12]

■

Pollyanna Lind is NCAP's information services coordinator.

The Louisiana State Experiment Station found that Avon Skin So Soft Bath Oil is an effective repellent for some species of yellowjackets. Two ingredients in Skin-so-Soft, mineral oil and isopropyl palmitate, are similar to natural repellents produced by paper wasps.[14]

Physical Controls

Reducing a yellowjacket problem may be as easy as restricting the food supply.[1,6] Pay particular attention to garbage cans and dumpsters. A garbage can with a domed top fitted with vertical swinging doors keeps yellowjackets away from garbage. Always keep garbage cans clean.[6]

Ground nests have been eliminated by placing a clear bowl over the nest entrance. The edges were secured by pushing the bowl into the dirt and filling any gaps with cloth. Thie yellowjackets are unable to leave the nest, but because they could still see sky, they did not dig a new way out. After a few weeks the colony starved and died.[15]

Two pharmaceutical companies in the Unites States use yellowjacket venom serum for immunotherapy. These yellowjackets are collected by professionals using modified vacuum cleaners. If there is a venom collector in your area, they often are willing to remove nests inexpensively. Vacuuming can be used for underground nests, nests located in structures, and some aerial nests. Empty nests can then be destroyed. This procedure should only be done by a professional.[16]

Aerial nests, which can be more difficult to control than underground nests, can be destroyed if they are accessible. Place a large plastic bag over the entire nest, knock the nest down into the bag, and seal the bag well. Put the bag and nest in direct sun on a hot day or in a freezer. The extreme temperatures will kill the yellowjackets.[6]

Yellowjacket traps which contain food baits or pheromones as attractants are widely available.[8] It is important to use noninsecticidal baits for traps to avoid harming birds or other animals which may feed on poisoned yellowjackets or baits.[17] Traps should be placed near the nest and away from people.

The "Oak Stump Farm Yellow Jacket Wasp Trap" has been recommended by a Rhode Island entomologist who conducted tests of five commercially available traps. It captures large numbers of yellowjackets, is easy to clean without being stung, and has a competitive price.[18] (Call Oak Stump Farm, Inc. for information about where this trap can be purchased. Their phone number is (973) 812-7070.)

Yellowjacket traps should be baited with proteins in early summer, and sweets in late summer. Protein baits need to be moistened or renewed more often than sweet baits.[18] Some protein baits include catfood, spam, beef, ham, fish or liver.[3,7] Apple juice and grenadine/cherry drink baits are effective sweet attractants, better than commercial baits.[18]

Biological controls

Nematodes (*Steinernema feltiae* and *Sphecophaga vesparum)* are successful biological controls for yellowjackets.[17,19] The nematodes can be mixed with water and poured into the hole of ground nesting yellowjackets.[12] These nematodes serve as vectors for an insect disease-causing bacteria that kills the yellowjackets.[17,19]

Other natural predators of the yelllowjacket are vertebrates such as bears, raccoons, and skunks. Some pest control specialists believe that pouring honey into the entrance of a ground nest to attract a predatory vertebrate can be effective control measures.[6]

Summary

Yellowjackets can be annoying and dangerous. However, it is important to remember that they are beneficial insects, predators of other insects that we often consider pests. Yellowjacket problems can be minimized by dressing appropriately and restricting yellowjacket food sources. This usually involves keeping garbage in containers they aren't able to enter. Traps can be used when yellowjackets are a problem in a particular area. These techniques will eliminate or reduce yellowjacket problems without the need for chemical poisons. ✦

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APFG Newsletter
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DEEP FRIED CHERRIES

Fresh fruit coated with batter and deep fried is a favorite dessert in several eastern European countries. Plums, apples or currants are prepared in the same manner. In Hungary this dessert is called Cseresznye Kisutve.

1 lb. fresh ripe red cherries
1 c. flour, all purpose
1/4 c. sugar
1/3 c. milk
1/3 c. dry white wine
3 eggs
fat for frying
confectioner's sugar
cinnamon

Wash cherries and wipe dry. Do not remove stems. Tie with thread to form clusters of 4 cherries. Combine flour, sugar, milk, wine and eggs in a bowl. Mix to make a smooth batter. Dip each cluster of cherries into batter, coating well; and drop into a kettle of deep hot fat (375F on frying thermometer). When golden, remove with a slotted spoon and drain. Serve at once with confectioner's sugar and cinnamon.