

ANIMAL DAMAGE CONTROL IN EASTERN UNITED STATES

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PREFACE

This report is an overview of ongoing animal damage control programs in the 31 Eastern States, made possible by scores of individuals and the organizations they represent. The response to requests for data was excellent. For example, all 31 State Wildlife Agencies contributed information on their programs. As was to be expected, the organizations contacted do not use the same format in discharging their responsibilities nor in the records they keep. Thus precisely recorded figures have to march side by side with "educated estimates", but at least the estimates were made by personnel intimately acquainted with a particular project. As this survey progressed, its base broadened to include several thousand organizational contacts that should have been made, a task beyond the limitations of this first endeavor. Thus isolated examples will often have to serve in place of a comprehensive assessment of animal damage control programs in the Eastern States.

STATE WILDLIFE AGENCY ANIMAL DAMAGE PROBLEMS

This survey initially concentrated on requesting data from each of the 31 State Wildlife Agencies whose responsibility is the management of game animals. Many State Wildlife Agencies have now expanded their authority thru legislation and Federal/State agreements to also cover nongame and endangered species. Each Agency was asked to rank by importance the animal species about which damage complaints were received, how many complaints could be handled by telephone or mail, how many required site inspections, and the staff-time required.

Filling out survey forms is not a popular pastime, particularly with organizations already stressed by staff reductions. Over simplification of the requests led to some confusion. Respondents asked, important by what yardstick; the number of complaints received, the species that required the greatest expenditure of staff time, or those species inflicting the most economic losses? John Stuht, Michigan Department of Natural Resources submitted data in each category, illustrating that there can be marked difference in the species included in the top three problem spots. In addition, the ranking will change from year to year as wildlife populations fluctuate, or as the result of the flare-up of a communicable disease like rabies, or

through seasonal climatic stresses placed on a species causing it to seek alternate food sources.

How the severity of the damage problem is viewed by a particular State Wildlife Agency can also be the result of its legislative mandate and the implementing regulations it has itself promulgated. For example, in those states where a landowner may dispose of any wildlife doing damage on his property without a permit, or without subsequent notice to the wildlife agency, the complaints are significantly reduced. If, conversely, a pre-control permit is required necessitating a damage-confirmation site visit, significant staff time and travel expense becomes involved. This is further augmented if the harvested animal must be turned over to a conservation officer (second visit). The staff commitment escalates if the wildlife agency itself must capture and remove a species, as in the case of populations needing further enhancement or having endangered status. This can require multiple site trips plus relocation travel.

The accompanying map-graphs (Figs. 1-6) show how the State Wildlife Agencies ranked the top three animal species causing damage problems in the calendar year 1982. In addition, the following species also occur in the top three problem listings:

SNAKES: Florida

SQUIRRELS: Rhode Island, Maryland

CANADA GEESE: Iowa, Michigan, Maryland, Delaware

FERAL DOGS: Delaware

MUSKRAT: Illinois, South Carolina

STARLINGS/BLACKBIRDS: South Carolina

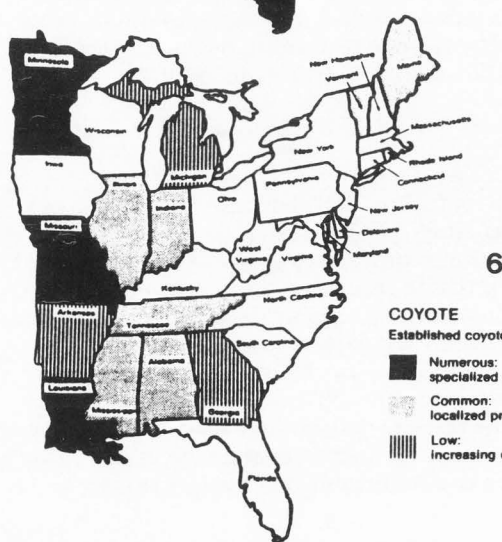
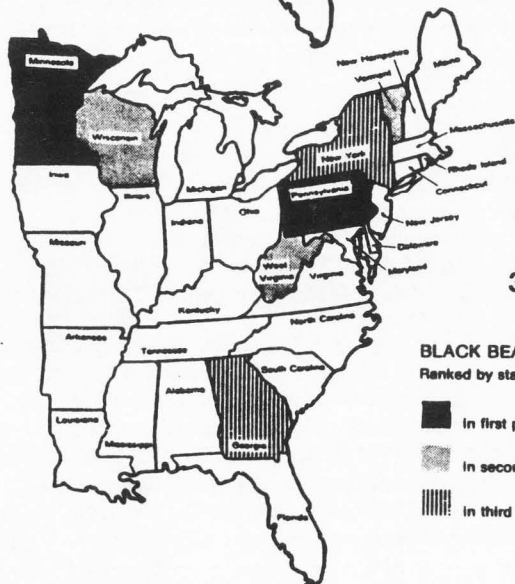
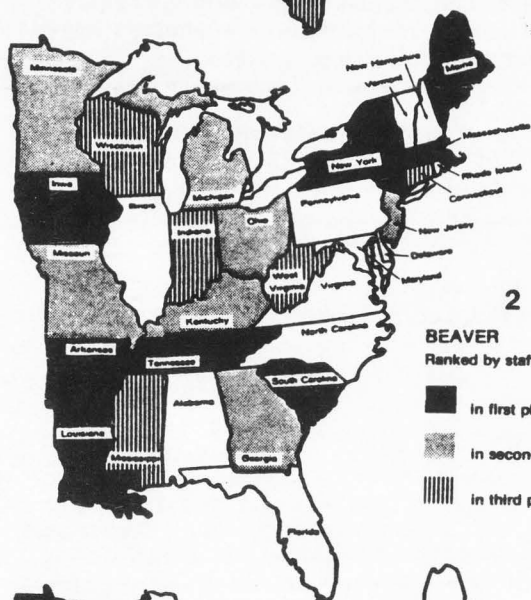
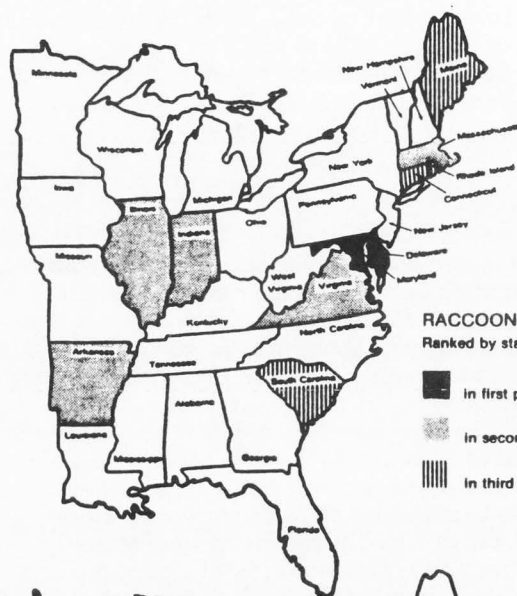
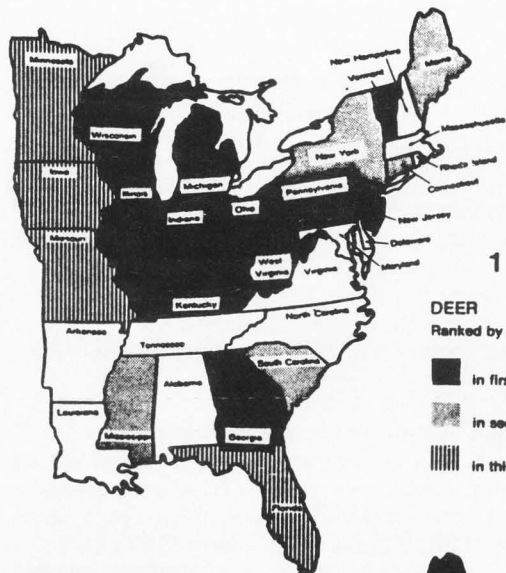
SKUNK/OPOSSUM: Rhode Island, Illinois

The total listing of animal damage complaints made to State Wildlife Agencies may involve 40 or more vertebrate species.

It is interesting to note that our success in re-establishing some wildlife species in areas where they had been harvested to local extinction in former years - beaver and Canada goose - has progressively developed an accompanying nuisance problem. Beaver in the State of Mississippi, due to a lack of fur-price incentive to harvest this furbearer, has become an economic liability so that now there is no closed season.

The Canada goose is proving to be a remarkably adaptive species to urban situations. Resident populations have now been established in every eastern state, and with it has come nuisance problems of no mean proportion on airports, golf courses, park lakes, reservoirs, etc. Frustrating capture and relocate projects are taking more and more time.

State Game Agencies Animal Damage Problems figures 1-6



Frustrating because most frequently geese don't stay put. As for actual damage, that can be important too. Winter wheat is particularly vulnerable to wintering concentrations of waterfowl. Donald Harke, U.S. Fish & Wildlife Service, made a survey in 1982 of five coastal counties in North Carolina and came up with a winter wheat depredation loss by swan and snow geese of \$1,182,000.

The coyote, on the other hand, is making it on his own. This predator is already a serious problem in Minnesota, Missouri, and Louisiana where three different approaches are used for reductional control: in Minnesota by certified private trapper, in Missouri by emphasis on trapping instruction for livestock producers, while in Louisiana there are eight trappers and an animal control supervisor on the staff of the Department. Mississippi would seem to have no less a coyote population but thus far the Department has not found it necessary to provide much field assistance. The explanation may lie in the fact that the trapper fur harvest in the 1981-82 season took 1,104 coyotes, while a hunter harvest survey shows a take of an additional 8,585 coyotes. The leading edge of this eastward extension of the coyote's range has now reached the Atlantic Coast, with all gradations of established numbers in between. Second only to the raccoon in its adaptability to human-dominated environments, the coyote will be a costly problem if its potential for damaging predation is underestimated.

Two staff-consuming problems have surfaced in connection with the Endangered Species Act, the American Alligator in the Gulf States and the Gray Wolf in Minnesota. The alligator is easily making it back on its own, once the poaching and overharvesting was corrected. After very few years in the endangered status, Florida and Louisiana could find few if any vacant habitat niches to transfer the reptile to. Louisiana alligators were sequentially downgraded to threatened by similarity of appearance status, thus permitting a controlled harvest by private trappers who in 1982 marketed meat and hides from 17,400 alligators.

Florida still does not have an open harvest season, but relies on directing a limited number of certified private trappers to complaint locations. The hides of alligators, where harvest is necessary, are then turned over to the Department which holds auctions and shares the proceeds with the trapper. Supervising the operation stemming from 4,500 incoming complaints in 1982 remains a serious drain on staff time.

Management of the endangered Gray Wolf within the Superior National Forest was adversely affected by the wilderness designation which stopped logging and the attendant succession of openings in the forest. As a consequence the deer herds, upon which the wolves preyed, declined forcing the wolves to spread more quickly into farm and ranching areas where, since 1977, the Minnesota Department of Agriculture has paid compensation for 278 cattle, 549 sheep, 1,565 poultry, 2 swine, 6 horses, and 11 goats killed or

crippled by wolf predation. The recent downgrading of the Gray Wolf's status to threatened will allow the Minnesota Department of Natural Resources more leeway in management.

STATE WILDLIFE AGENCIES, ADC SPECIES BY SPECIES LOG

Information on all ADC complaints on a species by species basis proved difficult to obtain. Such records are not usually kept on a department-wide basis even though special teams and individuals within the staff may have excellent data (which was made available for this survey). In a few cases the State Wildlife Agency conducted a short-term project to obtain such information. Connecticut Department of Environmental Protection, between June 1979 and July 1980, required 68 Department employees including conservation officers, wildlife biologists, research assistants and secretaries to fill out a 10-question form on each incoming ADC call. The results show that the Department receives an estimated 2,488 nuisance wildlife complaints annually, with 54.4 percent involving furbearing animals. Problems involving skunk and raccoon are the most numerous (27.7%).

Massachusetts also is keeping such records but recently hasn't had the staff time to analyze the data. A record for 1979 shows that 25 species of mammals, 29 species of birds and 8 other vertebrates were involved in nuisance situations, totaling 514 complaints, down from 768 the year before.

Georgia Department of Natural Resources, Game Management Section, between July 1981 and June 30, 1982 conducted an excellent study of this nature. The species-by-species record shows that 1310 complaints were received involving 54 species of vertebrate animals requiring 467 man-days to service.

Where states have special teams assigned to ADC programs very exact records on a species-by-species basis are frequently available. Missouri, New Jersey and Louisiana are just 3 examples that surfaced in this survey. No less important are the field itineraries of the Law Enforcement Divisions. Pennsylvania Game Commission drew on this source in making their response to this survey.

U.S. FISH AND WILDLIFE SERVICE, ANIMAL DAMAGE PROBLEMS

This Federal Agency handles as broad a spectrum of animal damage problems as do the State Agencies, but for the most part restricts itself to extension educational activities. In a logical division of responsibility the F&WS concentrates its efforts on bird damage problems, as shown on the accompanying map-graph (Fig. 7). This region-wide picture has some interesting counterparts at the state level. For example, all along the Atlantic Coast from the Chesapeake Bay to the Canadian border gulls at

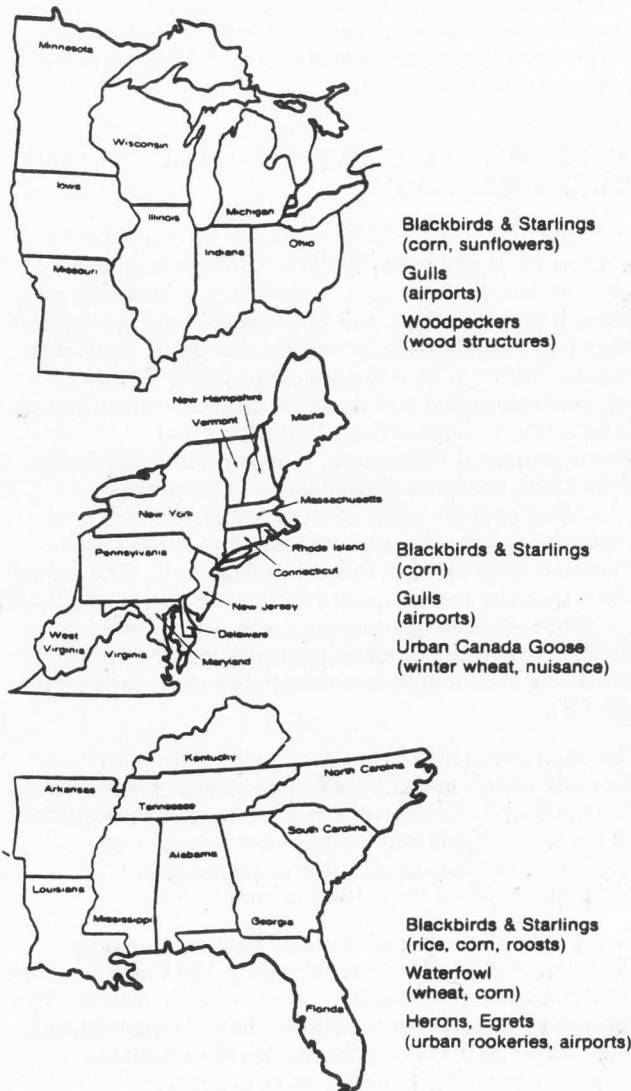


Figure 7. U.S. Fish and Wildlife Service

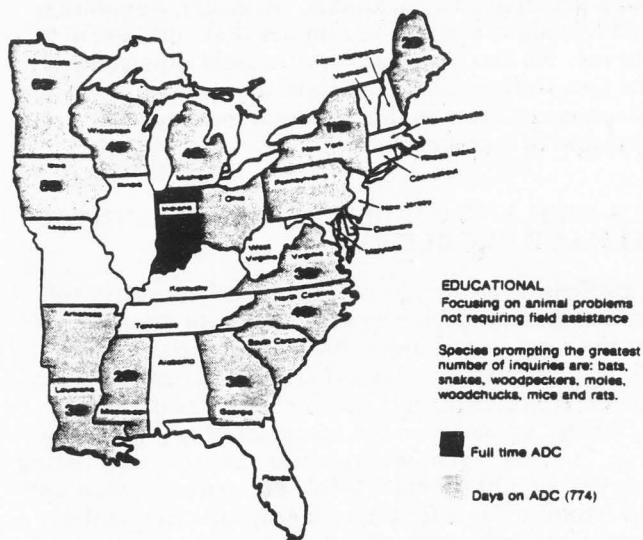


Figure 8. USDA: Cooperative Extension Service Wildlife Specialists

airports are a serious and time-consuming clearance project. The Herring Gull that in the 1930s nested on off-shore islands no further south than northern Massachusetts are now found all along the coast to Virginia. The expanding population of this avian predator is not only an economic problem for humans, but exerts significant pressure on other colony-nesting seabirds - terns, guillemots, eider ducks.

Speaking of ADC problems that are not directly human-oriented, John Peterson, U.S. F&WS, relates that an expanding cormorant population along the Coast of Maine is beginning to adversely affect the Atlantic Salmon Recovery Program by feeding on the hatchery-reared and tagged smolts as they migrate down river to the ocean.

Another interesting sidelight is reported by Lyle Stemmerman, U.S. F&WS, in Missouri. He relates that while blackbird roosts are his most frequently encountered problem in Missouri, the Red-Headed Woodpecker damage to wooden utility poles may be the most severe bird damage problem from the standpoint of economic losses.

The handling of bird problems is a very sensitive issue with the general public, complicated by the fact that the avian culprits are highly mobile and generally not damage-site or local residents. The economic losses to ripening fruits and grains by roving flocks can be enormous. For example, a report by the U.S. Fish and Wildlife Service estimated that the total loss in the top 10 corn-producing states in 1981 was nearly 195 thousand metric tons of grain, with Illinois ranking first losing 35,000 metric tons.

USDA: COOPERATIVE EXTENSION SERVICE, ANIMAL DAMAGE

Animal damage problems are handled by the Cooperative Extension Service (CES) on 2 levels: 1) by some 15 Extension Wildlife Specialists located in states shown on the accompanying map-graph (Fig. 8), and 2) by some 2,000 CES County Agricultural Agent offices staffed with agricultural and community services related professionals. Their approach to ADC is almost solely extension education, involving demonstrations, workshops, program spots, and instruction by telephone and mail. Inquiries on the larger game animals, endangered species, and bird control are referred to other appropriate agencies. This leaves, however, a very long list of troublesome vertebrate species, many with uncomplicated solutions for nuisance situations that CES can properly handle. The Extension Wildlife Specialists serve as back-up on the more involved situations that arise, but they too handle calls directly from the public in which bats, snakes, moles, woodpeckers, woodchucks, rats and mice head the list.

It was beyond the limits of this ADC program survey to contact each of the 2,000 CES county offices. Fortunately several state studies are available that indicate how heavy this workload can be. Back in the

21,406 LABORER-DAYS
an incomplete accounting



Figure 9. State Game Agencies Staff Time on ADC Problems

1970s, Jeffrey Jackson, CES Wildlife Specialist in Georgia, in an effort to inform himself on the ADC problems in his State made a survey of the 156 county Agents offices. He reports as follows:

County Agents in the Atlanta metropolitan area receive an average of 325 requests for vertebrate pest control information a year. Agents in the Coastal Plain area receive an average of 140 questions a year, as does the Extension Wildlife Specialist. The combined state total is 60,000 a year.

Donald T. Harke, U.S. F&WS, Raleigh, North Carolina, made a survey in 1980 of the animal damage control needs in that State. With 79 out of the 100 CES county offices responding he came up with a total of 28,558 requests for ADC information per year. His study is broken down on a species by species basis showing moles in lawns and gardens occasioning the greatest number of inquiries (6,909), followed by starling/blackbirds sprout-pulling damage (3,666), and crow depredations on grain and fruits (2,567). In North Carolina the CES Extension Wildlife Specialist, Gary San Julian, keeps a log of every ADC inquiry made to him directly. In a total of 353 inquiries 50 percent concerned mammals with squirrels heading the list (22%), followed by moles (16%), voles (11%) and bats

(10%). Thirty percent of the inquiries were on birds with woodpeckers (31%), pigeons (14%), blackbirds (7%), etc.

We can look forward to some exacting information on ADC needs in Indiana when the programs planned by Robert Corrigan, CES Animal Damage Specialist, Purdue University, get further down the road. Micro computer entries are being made of carefully made logs of incoming inquiries. He now estimates that counties without large cities in Indiana (86) averaged 105 ADC inquiries in 1982-83, while counties with large cities (5) averaged 305. The total estimate for the CES offices in Indiana is 11,458.

COUNTY GOVERNMENT ANIMAL CONTROL DIVISIONS

How many of the 2,007 counties that make up the 31 Eastern States have animal control personnel on their staff is unknown, but each in some manner provides information or direct assistance to its constituency on animal nuisance control. For lack of any other the county police respond. In the 4 counties surrounding Washington, D.C. there is a county government animal control department. In Montgomery County, Maryland the Department of Animal Control and

Humane Treatment, operating on a budget of \$1 million, carries a staff of 8 field wardens. In June of 1983 they are reported to have received 20-30 rabies calls a day, to have captured and sent to outside laboratories for diagnosis some 2,000 raccoons and a few skunk. Then on September 20, 1983 the Montgomery County Council agreed to spend an additional \$100,000 for a round-the-clock efforts to combat rabies and other serious animal control problems. The extra money will pay for 6 new drivers and other personnel. The county now has 400 live-traps to loan and operate.

Across the Potomac River in Virginia is the Fairfax County Animal Control Department with 21 wardens and trappers that have been "kept hopping" in the current rabies flare-up. In Fairfax County more than 1,500 animals (largely raccoon) have been trapped and tested for rabies in the last year and one half.

INCORPORATED CITIES, ANIMAL CONTROL DIVISIONS

Again, it was beyond the limits of this survey to have contacted all the incorporated cities over 10,000 population in the 31 Eastern States to determine if they have animal control operatives on their staff. Montgomery County, Maryland will have to serve as an example. There are 2 small incorporated cities in the county, Rockville (pop. 43,811) and Gaithersburg (pop. 26,424). Rockville has 1 and Gaithersburg 2 full-time animal control specialists. They report spending half-time on wildlife nuisance problems including the general list of urban mammals and birds.

STAFFING COMMITTED TO ANIMAL DAMAGE CONTROL EFFORTS

This survey was not very successful in determining the manpower presently involved in animal damage and nuisance animal control. In the first place, there are relatively few full-time ADC personnel. Ninety-nine percent of the program is conducted by personnel whose major assignment is in another, but related, field. It is also true that no professional wildlife biologist can escape some participation in the program, however minor. The problem arises in estimating what percent of that time is spent on ADC projects. Nine State Wildlife Agencies would not venture to "guess". Others made educated estimates. I like what Eugene McCaffrey, N. Y. Dept. of Environmental Conservation, wrote about his state-wide man-day figures on ADC projects, "they are very imprecise". However, there are Divisions in every State Agency that have come up with man-day figures based on well-kept daily logs. The 2 map-graphs (Figs. 8, 9) on staff time for State Wildlife Agencies and for Extension Wildlife Specialists will illustrate the problem.

Take, for example, the case by case time record of Georgia's *Game Management Section* that came up with 467 days of staff time broken down by each service call. Subsequently, Georgia's DNR provided

me with a creditable estimate of ADC time provided by their *Law Enforcement Staff*. These estimates vary from 2 percent of a warden's time to 1 instance of 10 percent, depending on the District (12) in the State where the field staff is located. Two percent of a man's time over a year doesn't sound like much, but the aggregate for the whole staff can be very meaningful. In Georgia the *Law Enforcement Staff* contributes 2,098 man-days to ADC projects.

This part-time distribution of ADC responsibility has some very definite advantages. It places response capability in the vicinity of ADC problems. Prompt action can do a lot for public relations.

The U.S. Fish & Wildlife Service (F&WS) has 41 ADC field biologists in our 31 Eastern States, 16 in Region 3, 16 in Region 4, and 9 in Region 5, with Supervisors in each of the Regional Offices. The total funding for the ADC activities is \$1,881,000, of which 80-90 percent is spent on resolving migratory bird damage problems. While the thrust of their activities is extension education, they nevertheless work in the field with State Biologists in Canada Goose roundups, roost dispersal efforts and endangered species.

The county offices of the Cooperative Extension Service are very busy places, especially during the growing season. Its multifaceted projects make it a focal point for information, including animal nuisance control. Even if such offices devote an average of only 2 hours a week answering animal nuisance inquiries, that adds up to 22,000 man-days a year in the Eastern States, which can short-stop enormous numbers of ADC inquiries for which the expertise of a professional wildlife biologist is not needed.

On the operational side at the county level are County and City Animal Control Wardens that devote up to 50 percent of their time on wildlife-related ADC problems. This provides Montgomery County, Maryland with an equivalent of 1,210 labor-days of field service per year in ADC.

The National Pest Control Association (NPCA) reports a survey that identified some 10,000 Pest Control Companies in the United States. NPCA estimates that 70 percent of these firms are located in the 31 Eastern States. These commercial companies average 3.5 to 4 field operators. NPCA estimates that 15 percent of a company's business is in vertebrate pest control. That adds up to 1,039,500 man-days, the equivalent of 4,725 full-time ADC operatives in our 31 Eastern States. In checking the "yellow pages" in my telephone book I find I have 12 commercial Pest Control firms, officed in Montgomery County.

Up to this point I have neglected to report the role of the *State Departments of Agriculture* (SDA), other than that in Minnesota. In a number of States, Maryland, Virginia and Tennessee for example, SDA is playing a major role in the control of nuisance birds, backed by legislative authority. Virginia's program is strongly oriented to actual field assistance, and in 1982, according to Philip Eggborn, devoted 610 man-

days answering some 535 bird damage complaints. Crows, starlings and blackbirds congregating in feedlots and the pulling of sprouting corn were serious problems, as were winter roosts. English sparrows and pigeons were a problem in warehouses and around homes. But the program also included 75 complaints during the year on woodpeckers, and 25 cases where Canada Geese had to be repelled or captured and relocated from residences and golf courses.

This sector on staffing for animal damage control would not be complete without recording that large industries that control sizable blocks of land - timber companies, public utilities - all have biologists on their staffs. All Public Land Agencies - U.S. Forest Service, Bureau of Land Management, Park Service, Bureau of Reclamation, Corps of Engineers, the Armed Services, TVA, yes even the 88.8 million acre National Wildlife Refuge System - all have sizable staffs of wildlife biologists that perform must include the role of ADC.

The participation of State and Federal Health Departments in ADC projects is indirect, but nevertheless very realistic from the standpoint of staff and funding commitments. Intermittently they must place their diagnostic laboratories on call when a flare-up of diseases transmittable animals to man occurs. Maryland in the current rabies epidemic in raccoon has relied on 2 such labs, the State Health Department Laboratory in Baltimore, and the Maryland State Agricultural Department Laboratory in College Park.

INTERLOCKING OF ADC CAPABILITIES

Any number of participants in ADC programs have felt the pinch of reduced staff and increased workload. As a result, some very interesting alternative arrangements have been entered into. For example:

Maine Dept. of Inland Fisheries and Wildlife advertised for applications and then carefully selected 14 qualified private trappers, each living in a prescribed district of the State. They are salaried, part-time employees of the Department working only when directed to a problem site by the Animal Control Supervisor, Henry Hilton. They will be directed to trap and remove (or relocate) bear, coyotes, raccoon and beaver. Florida has much the same arrangement for alligator control except that the trappers are not Department employees and only participate in the State's sale of the hides. Montana has a similar arrangement with private trappers for coyote control are not Department employees but are compensated by a bonus payment on each coyote removed.

Connecticut Dept. of Environmental Protection found itself in need of assistance in handling ADC complaints. The Department has carefully selected volunteers from among the active trappers in the State. Seventy-two percent of the volunteers belong to the Connecticut Trappers Association according to Peter Bogue, Asst. Dir. of the Wildlife Bureau. Property owners requesting assistance from the Department will be given the name of a volunteer. In

the appointment as a volunteer, the trapper agrees that under no condition will he solicit fees for services rendered nor advertise his services as a *Nuisance Wildlife Control Volunteer*. Furthermore, all animals taken during the closed season for that species must be released within 24 hours.

The Illinois Department of Conservation has also entered into contractual agreements with individuals to control nuisance wildlife in urban areas. But under the Illinois arrangement the contractor may charge for his services. Illinois has 25 approved agreements to date, primarily in the Chicago area, according to David Klinedinst.

The Delaware Department of Natural Resources maintains a selected list of licensed Pest Control Operators who are willing to deal with wildlife problems for a fee, and this list is supplied to a caller with an ADC problem.

In the County Agricultural Agents office in Gaithersburg, Maryland there are between 140-160 telephone calls a day for information. The staff felt tied to their telephones. So, following the practice in other counties in the East, they held a series of 30-day schools on all phases of pest control problems, plant identification, etc. In return, individuals receiving this training agree to devote an equal time covering telephone calls at the Gaithersburg office on that subject matter. All three incoming telephone lines are now covered each morning from 9 to 12 by volunteer "Master Gardeners". Many of these are retired people with impressive professional backgrounds. On a wall chart each of the 45 Master Gardeners marks the days he elects to come to the Gaithersburg office.

SOURCES OF INFORMATION

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Wood, Bob, Ornithol., Maryland State Dept. Agri.

Wyman, O. Lewis, Prog. Leader, ANR/CRD, Univ. Maine

MONTGOMERY COUNTY, MARYLAND

Columber, Warren, Dept. Animal Cont. Ferguson, Thomas, Act. Dir., Dept. Animal Cont.

Smith, Nancy, Animal Cont. Off., City of Gaithersburg

PEST CONTROL

Grimes, Jack, National Pest Control Association, Vienne, Va.