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THE EUROPEAN FERRET, *MUSTELA PUTORIUS*, (FAMILY MUSTELIDAE) ITS PUBLIC HEALTH, WILDLIFE AND AGRICULTURAL SIGNIFICANCE

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ABSTRACT: The European ferret, *Mustela putorius*, a species prohibited in California, has become increasingly popular as a household "pet." As a result, its threat to public health, wildlife and agriculture has markedly increased. There has also been a consequent increase in reported attacks on humans, especially infants, including several fatalities. Reports of rabid European ferrets are also on the increase. When European ferrets establish "feral" populations, domestic poultry, waterfowl, game birds, rabbits and other species are at substantial risk. At this time, a California Legislature Assembly Bill has been introduced to change the status of the European ferret from a wild animal to a domestic pet. Passage of this bill would allow unlimited legal importation into California of this now prohibited and potentially detrimental species. The opportunity is therefore taken to increase the public's awareness on the dangers of European ferrets and by extension to also include other exotic wild animals as "pets."

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The European ferret, conspecific with the European polecat, *Mustela putorius*, is not a domesticated animal even though it has been captive bred by man since at least Roman times. It has been selectively bred to be an intelligent, efficient, effective and vicious killer, trained to "ferret out" and quickly dispatch rodents and rabbits and to respond to the commands of the "handler" (an adult human). Some were also captive bred for fur, and both the animal and the fur were called "fitch." Intraspecific crosses have occurred between both of the selectively bred strains and have backcrossed as well with parent stock under both captive and "wild" conditions throughout this period. Apparent docility toward the "handler" was also selected for in those utilized in "ferreting." European ferrets are quite playful, "cute" and like to be held, but until recently were certainly not considered desirable pets. The real popularization of the European ferret as "pets" can be traced to the 1982 movie "The Beastmaster" where Marc Singer, acting in the fantasy as a medieval Tarzan, had two mischievous European ferrets called Krodo and Podo that besides saving his life, catapulted the European ferret into the trendy and yuppie "pet of the 80s." Unfortunately, the centuries of captive breeding did not breed out: the predilection for vicious, unprovoked, and often frenzied attacks on infants, which are apparently perceived as prey; the easily provoked attacks on older children and adults while handling or playing with them; the high level of susceptibility to the rabies virus; and last but not least the "polecat" stink, which even when descended by surgical removing the scent glands (like their cousin the striped skunk, *Mephitis mephitis*) still smell because of odoriferous sebaceous glands all over the body. European ferrets are the only wild animals that require two delicate surgical operations to become "pets" (i.e., neutering for increased docility and the removal of scent glands to reduce but not eliminate their undesirable odor). The European ferret (*Mustela putorius*) should not be confused with our own highly endangered species the American black-footed ferret (*Mustela nigripes*) which is restricted to a few of the remaining prairie dog "towns" of the Great Plains.

In light of a recent California Legislature Assembly Bill (AB No. 2497) "Wild animals: domestic ferrets [sic]¹" introduced by Assembly Member Goldsmith (coauthor Senator Kopp) on January 11, 1994; both the approach and content of this presentation has been modified to meet a more urgent and critical need (Goldsmith and Kopp 1994).

AB No. 2497 would allow "domestic" ferrets [sic]¹ "to be owned as pets without a permit as long as the owner of a ferret [sic]¹ maintains, and can produce documentation showing that the ferret [sic]¹ has been vaccinated against rabies with a vaccine approved for use in ferrets [sic]¹ by the United States Department of Agriculture and administered in accordance with the recommendations of the vaccine manufacturer."

The bill would amend Section 2118 of the Fish and Game Code in two locations: 1) under Order Carnivora "All species, [prohibited] except domestic dogs (*Canis familiaris*) and domestic cats (*Felis catus*)" would be amended to strike the "and" between dogs and cats and following (*Felis catus*) to add ", and domestic ferrets [sic]¹ (*Mustela furo* [sic]²) to be owned as pets, as long as the owner ..." as in the paragraph above; and 2) following the listing of mammalian orders in the final paragraph "Mammals of the orders Primates, Edentata ... are restricted for the welfare of the animals, except for the families Viverridae and Mustelidae in the order Carnivora are restricted because such animals are undesirable and a menace to native wildlife, the agricultural interests of the state, or to the public health or safety" would be amended to add between animals and are undesirable ", not including domestic ferrets [sic]¹ to be owned as pets,". The European ferret is obviously a member of the Family Mustelidae!

The bill would also amend Section 25990.3 of the Health and Safety Code which is currently a single, simple and easily interpreted paragraph." 25990.3. The

[sic]¹ not just ferret but European ferret. [sic]² *Mustela putorius furo* not *mustela furo* with a lower case m.

state department shall publish from time to time a list of animals which may not be imported into this state except by permit from the state department. Unless such a permit is issued pursuant to the provisions of this chapter, it is unlawful to import into this state any wild animal for which a permit is required by the state department." The amended Section 25990.3 would add a second paragraph: "A permit shall not be required to import into this state domestic ferrets [sic]¹ to be owned as pets, as long as the owner of a ferret [sic]¹ maintains ... of the vaccine manufacturer" as AB No. 2497 above. There are also two minor changes in the original paragraph, the "which" after "list of animals" is changed to "that" and "the provisions of" is deleted. The proposed amendment virtually doubles the length of the Health and Safety code!

The European ferret (*Mustela putorius*) has been a prohibited species in California since 1935. Of all the vertebrates covered in Section 671, Subsection (c), of Title 14, California Administrative Code, Importation, Transportation and Possession of Wild Animals; the European Ferret (*Mustela putorius*) is the ONLY animal of vital interest to all three California Departments involved with Title 14, Section 671, i.e., California Department of Food and Agriculture, California Department of Fish and Game, and the California Department of Health Services.

The European ferret's predacious nature and wanton destruction of poultry, rabbits and other small livestock is well documented, as is its disastrous effects on game birds, waterfowl and other wildlife. However, the recent numerous and widespread reports of vicious unprovoked attacks on infants, including several deaths, has brought the public health aspects of the European ferret into extremely sharp focus. This coupled with the increasing reports of rabid European ferrets adds even greater public health importance to the species.

There have been and are concerted efforts by pet ferret proponents to allow unrestricted importation of European ferrets into California. It appears to be a nation wide campaign begun in the mid 1980s to popularize and sell European ferrets, by eliminating state laws and municipal ordinances, that restrict the possession of European ferrets as "pets." This includes eliminating laws and ordinances prohibiting "wild animal pets" in general.

An example of the above was an article in the magazine American Ferret (Anonymous 1986a) titled: "Your help is needed to eliminate restrictions against ferrets [sic]¹," in which they pointed out claims to support their position. Constantine and Kizer (1988) summarize the pet ferret proponents claims as: "1) ferrets [sic]¹ are domestic, rather than wild, and therefore, they should not be restricted; 2) ferrets [sic]¹ bite people less often than dogs, so they are less hazardous; 3) pet ferrets [sic]¹ are kept indoors, so there is no danger that they will get rabies from wildlife; and 4) ferrets [sic]¹ will die if they escape and are not cared for by man." The authors then proceed to negate each claim of the pet ferret proponents with well documented evidence, citing 115 references spanning 150 years (i.e., 1837 to 1987).

The European ferret has been bred and kept by man since at least Roman times to kill rodents and "ferret out" rabbits. Whether it was derived from the European

polecat (*Mustela putorius*) or the Steppe polecat (*Mustela evermanni*) or both is still unresolved since traditional taxonomic criteria may be affected by selective breeding. However according to King (1990) the European ferret is fully interfertile with the European polecat and has the identical karyotype, consequently it is usually considered conspecific with *Mustela putorius* as a form or subspecies. For convenience, since it has been captive bred for a long time, the trinomial *Mustela putorius furo* is often used to distinguish the European ferret from its ancestral stock. This trinomial is sometimes shortened to *Mustela furo*; however, "that name disguises the important fact that the ferret [sic]¹ and European polecat belong to the same biological species" (King 1990).

Sue Coffee, a detective in the child abuse section with the Carson City Sheriffs Department, was watching Good Morning America on September 18, 1985 which had a segment on European ferrets. "The speaker was promoting them as pets and stated that although they can bite, there are no documented reports of them injuring someone and that they make good pets" (Coffee 1985). She called the station immediately after watching, explaining that she was investigating a case at the time where a European ferret ate the face of a 29-day old baby while sleeping in a play pen (Figure 1). While investigating that case she heard of two additional cases within 40 miles (Figure 2). She stated that if there were three cases in her area alone that there must be other cases nationwide, and "that a ferret [sic]¹ attacks so rapidly the damage is almost unpreventable, unless people do not have ferrets [sic]¹ as pets." The broadcast provided her with the impetus to solicit European ferret attack information from health officials, law enforcement personnel and other agencies throughout the United States. As a result five months later (February 21, 1986) the California Department of Health Services had already learned of 33 infants and young children attacked by "pet" European ferrets (Anonymous 1986), and also requested attack and treatment data for 1985 and as well as previous years. Within two years of these requests, information had been obtained on 452 European ferret attacks, including 64 unprovoked attacks on infants and young children, during the 10 year period from 1978 through 1987. Four hundred twenty-five were from Arizona, Oregon and California. Even though European ferrets are illegal in the state, 100 of these attacks were reported from California. The remainder were from 15 other states plus an additional fatal case from England. A comprehensive 65-page report was developed from the data accrued: "Pet European Ferrets; A Hazard to Public Health, Small Livestock and Wildlife" (Constantine and Kizer 1988). The document reviews the pertinent historical and recent literature on European ferrets through 1987, as well as listing all infant attacks and known rabid European ferrets for the 10 year period. It also discusses, in depth, relevant aspects of the European ferret, in strong support of the prohibited species status, contradicting the "pet ferret [sic]¹" advocates' stand.

The phenomenal increase in European ferrets as "pets" in the last 10 to 15 years has led to a subsequent marked increase in reports on the detrimental aspects of this so called "pet." As an example, the first report received by CDC (Center for Disease Control), Atlanta,



Figure 1. September 1985. Girl, 29 days old. Nose eaten away, chewed up most of face, including eyelids and lips as well as hands. Infant sleeping in playpen at 0200 hrs, in playpen only 10 ft. away from her sleeping father. European ferret: non-neutered neutered five month old male. (Photo from Sue Coffee.)



Figure 2. December 1981. Boy seven months old. Hundreds of bites on face, hands, and even back of the knee. Infant asleep in crib. Babysitter's European ferret: non-neutered four month old male. (Photo from Sue Coffee.)

Georgia, of severe bite trauma by a European ferret was not until 1981 (Anonymous 1981). The case involved a five week old infant attacked in a crib on Thursday, March 12, 1981 in Colorado. The European ferret chewed away an estimated 40% of both ears plus multiple punctures over the face, including the eyelids. The European ferret was found in the yard the previous day, appeared friendly, ate ferret pellets, used a litter box and played with two year old twins and a one year old prior to the vicious unprovoked attack on the infant. In the editorial note following the narrative it was also stated that "at least one rabid ferret [sic]¹ has been reported (VPH Notes October 1950)."

A recent (1993) U.S. District Court case in Pennsylvania provided additional conclusive legal documentation that the European ferret is a wild animal (McClure 1993). The case involved an unprovoked attack on a seven month old girl on March 8, 1991. The 23-page document presents extensive background on European ferrets citing numerous briefs and other support

for its status as a wild animal. The summary provides the following distinction: "Domestic animals include those which are tame by nature or from time immemorial have been subjected to his will, and have no disposition to escape his domination." "Wild animals comprehend those wild by nature, which, because of habit, mode of life, or natural instinct, are incapable of being completely domesticated, and require the exercise of art, force, or skill to keep them in subjection." Consequently, "...ferrets [sic]¹ have been known to return to a feral state upon escaping, and have done so in large numbers in New Zealand. Obviously, an animal which has a propensity to bite, which has traditionally been kept for the purpose of hunting rabbits and rats, and which will savagely attack small children without provocation is not an animal capable of being completely domesticated. It appears that people have kept ferrets [sic]¹ as house pets only in recent years, and it cannot be said that they have been accustomed to this type of association from time immemorial. At best, ferrets [sic]¹ natural disposition to

attack has been used as a tool by humans in ridding themselves of rodents and other pests. The instincts of a ferret [sic]¹ clearly are not such as would allow it to be completely domesticated." It is interesting to note that Pennsylvania is the state where the Path Valley Farm that breeds and sells upwards of 15,000 European ferrets a year. It is run by Charles and Lynn Morton who are also in the forefront of lobbying efforts to overturn California laws forbidding European ferret imports (Carroll 1986), and were in the "Good Morning America" segment seen by Sue Coffee on September 18, 1985.

The argument that European ferrets bite people less often than dogs is of course easily countered by the fact that there are many more dogs than European ferrets. There are over 50 million dogs in the United States with ball park estimates of up to one million European ferrets. Off the wall estimates for illegal European ferrets in California are any where from 10,000 to 100,000. Whatever the number is in California, there has been an enormous increase in recent years. Whereas dog bites are a reportable bite in California, European ferrets are not, and if reported at all are under "other animals." Being illegal in California, most of the bites by European ferrets are never reported unless, because of the viciousness of the attack, require medical treatment and the treating physician actually reports the incident does it show up in the statistics. An indirect approach that shows an increase in European ferrets in California is: 1) through the number of animals tested for rabies; and 2) CDFA Border Station vertebrate interceptions. The annual reports from 1964 to 1992 of "Number of animals tested for rabies and number found positive by species, California Health Jurisdictions" were obtained from the CDHS Veterinary Public Health Section (Hull 1993) and systematically reviewed. The results showed that for the 10 year period from 1983 to 1992: 312 European ferrets were tested which ranked 14th of the 63 mammal categories tested, and for positive rabies ranked 12th ahead of dogs which ranked 13th (of 19,544 tested). The previous 10 year period 1973 to 1982: 9 European ferrets were tested ranking 30th of 61 mammal categories. The increase in the number of European ferrets in California apparently increased considerably during the 1983 to 1992 period (a 30-fold increase was observed in rabies testing between the two 10 year periods). The number of European ferrets tested for rabies from 1983 to 1992 by year were: 0, 9, 19, 40, 39, 48, 77, 42, 18, and 20; ranging from 0 in 1983 to 77 in 1989. Figure 3 graphically illustrates the data from the California Border Station vertebrate pest interceptions by year from fiscal year 1974/75 to 1992/93. During the 19 fiscal years there were 2,191 European ferret interceptions of 4,300 vertebrate intercepts (i.e., 50.1%). The increase in European ferret interceptions over time can easily be seen: a) none during the first two years, 1974/75 and 1975/76; b) only 5.3% (3) in 1976/77; c) breaking 40% (65 at 43.6%) during 1979/80; and d) peaking out in 1992/93 at 63.3% (226) of all vertebrate intercepts. The peak number was during 1986/87 when 237 European ferret interceptions were made representing 54.6% of all vertebrates. The California Border Station data show a nearly 12-fold increase (11.9-fold) in the percentage of European ferret interceptions from 5.3% in 1976/77 to 63.3% during

1992/93. Gerbils have also been included in the histograms to show the turnover in popularity of the two species.

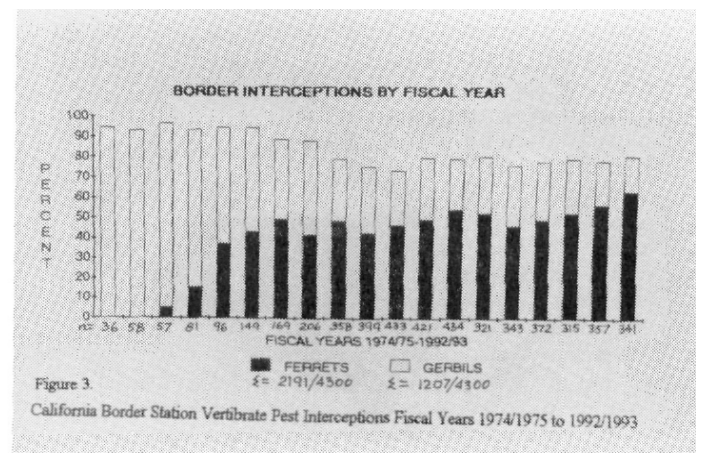


Figure3. California Border Station vertebrate pest interceptions fiscal years 1974/75 to 1992/93.

Since the Constantine and Kizer (1988) review, numerous additional infant attacks and rabid European ferrets have been reported as well as an additional infant death. The death occurred in Hillsboro, Oregon, on February 1, 1991, when a two and one-half month old girl (born November 14, 1990) was attacked and killed while sleeping in her play pen, by a free roaming "pet" European ferret. The police chief remarked: "It's one of the most gruesome investigations our detectives have ever had to work on" (Hogan 1991).

A superb scenario unfolded during January 1992 in Surfside, Horry County, South Carolina, reported in a memorandum February 11, 1992 to Col. Dutton of the Ft. Bragg Veterinary Headquarters (Anonymous 1992). Four European ferrets were obtained by a Surfside man in Pamplico, South Carolina, and brought to Surfside. Between August 1991 and January 1992 he gave three away to other people, these in turn were passed through several owners. In January the man said to the grade school boy next door that he did not want the remaining animal anymore. The boy said a science teacher at school might want it, the neighbor agreed and gave it to the boy. The following day he took the European ferret to St. James Middle School. Prior to delivering it to the teacher it was on the school bus, school grounds, in the library and the lunch room. From the time he left for school until he delivered it to the teacher, it had bitten or scratched 23 people, including the boy and then it bit the teacher. The teacher took it to a local veterinarian biting him also. The veterinarian reported it to the Conway Health Department which obtained and sacrificed it for rabies testing in Columbia, South Carolina. The results were positive. The health department located all the people which were bitten or scratched by any of the four original European ferrets, including the Surfside man and his family and the subsequent owners of the three European ferrets he had given away. All of the 32 people that were bitten or scratched were started on rabies

treatment. Of the other three European ferrets given away two died (presumed by the health department to have died from rabies) while the third was sacrificed for rabies testing and was found to be negative.

The United States Department of Agriculture (USDA) has listed a rabies vaccine for European ferrets, manufactured by Rhone Merieux, Inc., coded RM IMRAB3 for dogs, cats, sheep, cattle, horses, and European ferrets. The dose they recommend for European ferrets is one ml at three months then annually as a subcutaneous injection (Compendium of Animal Rabies Control, 1993, Part III: Vaccines Marketed in US and NASPHV Recommendations). The California Department of Health Services Compendium of U.S. Licensed Animal Rabies Vaccines and their Application in Dogs under the California Rabies Control Program January 1993, lists RM IMRAB 3 but excludes European ferrets from usage.

In the California Department of Health Services "Public Health Policy Regarding Ferrets [sic]" of February 1993 (Barrett 1993) it should be noted "that rabies vaccine manufacturers have not identified an appropriate animal bite quarantine period for this species [European ferret]. Therefore, unlike dogs and cats which are quarantined for a rabies observation period of 10 days following an animal bite, the vaccine manufacturer recommends that currently vaccinated ferrets [sic] involved in animal bites be euthanized and tested for rabies. This policy is based on the lack of information on the ecology of rabies in the ferret [sic]¹ species." "This situation places California public health professionals in the position of having to order the death of illegal pet ferrets [sic]¹ when these animals bite their owners or other persons. However, prudent public health practices would allow for no other option."

European ferrets have established wild populations throughout the British Isles including cold Scottish islands, the Mediterranean, south eastern Europe and large populations in New Zealand (King 1990). Here in North America one of the best stories involves New London, Ohio, which called itself at one time "Ferretville U.S.A." A quote from Dolensek and Burn (1976): "When European ferrets were originally imported into the United States, around 1875, their natural aptitude for ratting made them extremely popular. Many people raised ferrets in their back yards and professionals bred them in large numbers (in fact New London, Ohio, used to call itself Ferretville U.S.A. because many thousands of these animals were once raised and sold there). But because ferrets [sic]¹ are natural hunters and because they are hardy, they soon became a plague for poultry farmers who were appalled at the ease with which a ferret [sic]¹ could learn to love chickens and a life in the woods." From 1984 into 1986 a commercial vertebrate pest control agent in Sonoma, California, trapped two European ferrets in a creek bed near Sebastopol, saw one on California State Highway 12 and Sonoma Creek, one near the Napa River in Napa and one come up from a burrow in Candlestick Park, San Francisco (Hunt 1986). As a detection biologist with CDFA the author saw a European ferret crossing US 95 near Lost Lake north of Blythe. Reports were received without documentation of other European ferret sightings in Southern California. It can be seen that European ferrets are established in climates

much more severe than most of California with the exception of some desert and high mountain areas. California's poultry and game bird producing areas could be readily colonized by the European ferret. As Eldridge Hunt (1986) states: "We don't need 210 years of bounty system like Great Britain to drain government dollars to try to control ferrets [sic]¹. We need to prevent their establishment."

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