

RATS!

SUMMARY

Orange County has a dirty little secret . . . a rat problem! The common roof rat (*Rattus rattus*) lives in overgrown plantings and occasionally in homes. Rats are carriers of disease. The Orange County Vector Control District (OCVCD) is responsible for controlling rats.

In the public's mind, rats are associated with slums. Our prosperous, affluent county is experiencing a significant increase in rats, especially in the southern and hilly portions of the county.

The most effective way to control rats is to limit their ability to nest and breed. According to OCVCD personnel, little action has been taken in the county in this regard; however, a plan is being formulated by OCVCD to address the clearance of harborage. It would be more cost effective to take steps to prevent the breeding of rats, rather than to allow them to breed and poison them after their numbers have grown. Orange County needs an aggressive program to clear or trim overgrown plantings and vines, which serve as nesting sites for rats. The *California Health and Safety Code* § 2270, and § 2862 (code) allows the OCVCD to take an aggressive role in reducing rats. The code contains provisions to notify landowners that overgrown vegetation is a public nuisance and will be cleaned at landowner's expense should they fail to comply with abatement notices.

PURPOSE

The purpose of this study is to determine if Orange County uses all means at its disposal to bring rats under control.

BACKGROUND

Animals or insects that carry disease agents to humans are called vectors. Africanized Honeybees and Red Imported Fire Ants have already established themselves in Orange County. Increasing problems with vectors are expected in the future. West Nile Virus, carried by birds, is expected to reach Orange County within three to four years. Mosquitoes, carriers of malaria and encephalitis, may increase dramatically if marshes or wetlands are created to contain urban runoff. These problems will put an increasing strain on OCVCD and make it difficult to effectively deal with the rat problem.

Rats can harbor bubonic plague bacteria and typhus microbes. According to the OCVCD pamphlet, *What You Can Do To Prevent and Control Rats*, "The potential of outbreaks could increase if rat populations are allowed to increase unchecked." In addition to carrying disease agents, rats can damage electrical wiring and insulation. As shown in Table 1, service calls to OCVCD about rats are increasing in many areas of the county.

From some areas, complaints to OCVCD have increased by 300 percent in the past five years. Seventy percent of the calls to the OCVCD regard outdoor rats as opposed to rats that have entered a home. According to OCVCD personnel, rat problems are probably more common than the statistics indicate. Residents of affluent neighborhoods are reluctant to report rat problems; and residents of less affluent neighborhoods may accept rats as a fact of life without complaint. Orange County efforts, to date, have focused on poisoning rats in response to citizens' complaints.

According to the OCVCD pamphlet, "Roof Rat survival ...is dependent upon the existence of these three basic environmental conditions: abundance of food, available sources of water, and access to suitable harborage."

Abundance of Food

Rats are omnivorous and find ready food sources in pet food, home gardens, and orchards. Peaches, oranges, and avocados are among their favorite foods. The sunny climate and lack of harsh winters provide a year-round growing season for vegetation in the rats' diet. Control of food sources does not pose an easy answer.

Available Sources of Water

Rats do not require a great deal of water. Most of the residents of Orange County use year-round irrigation to sustain their gardens. Furthermore, many vegetative food sources for rats have a high water content. There is no practical way to deny water to rats.

Access to Suitable Harborage

The most available means of preventing the growth of rat populations is preventing access to harborage or nesting areas. Rats nest in overgrown or untrimmed plantings and vines, such as dead palm fronds (Figure 1), bougainvillea and Algerian Ivy, which provide shelter and defense. The answer is to keep plantings thinned and trimmed, thus denying nesting grounds for rats.

The OCVCD has the authority to remove rat harborage; however, according to OCVCD personnel, OCVCD usually responds by placing poison traps and suggesting to homeowners that the harborage be removed. The *California Health and Safety Code* Section 2800.5 describes a public nuisance as ". . . Any breeding place or place of growth of a pest . . . which . . . exists by reason of any artificial change in the natural condition of the land on which it is found." The ensuing sections of the code describe the means by which landowners will be informed there is a public nuisance on their property. Section 2858 states that the OCVCD can ". . . Direct the owner or party in possession to abate the nuisance within a specified time . . . and . . . perform, within a specified time, any work necessary to prevent the recurrence of the pests in the places specified in the notice." The Section continues to explain how property owners may be assessed for costs if they refuse to comply.

Table 1. OCVCD SERVICE REQUESTS - RATS BY CITY

CITY	1995	1996	1997	1998	1999	2000	2001 (Jan-Oct)	Total
Aliso Viejo	81	134	142	172	212	175	234	1,150
Anaheim	458	515	528	457	455	462	377	3,252
Anaheim Hills	432	497	570	569	583	476	491	3,618
Brea	124	151	177	182	131	132	130	1,027
Buena Park	126	129	113	124	166	126	99	883
Capistrano Beach	49	68	53	61	60	50	27	368
Corona Del Mar	108	162	150	170	141	120	123	974
Costa Mesa	342	372	374	415	396	346	341	2,586
Coto De Caza	77	47	104	193	149	217	324	1,111
Cypress	60	94	94	95	76	66	48	533
Dana Point	158	192	274	282	278	307	261	1,752
El Toro	13	11	35	11	7	2	4	83
Fountain Valley	199	179	234	246	248	265	205	1,576
Fullerton	395	470	529	546	526	407	428	3,301
Garden Grove	449	512	468	497	483	382	324	3,115
Huntington Beach	421	422	486	548	559	547	466	3,449
Irvine	484	572	600	656	579	550	601	4,042
La Habra	13	31	13	166	167	135	153	678
La Palma	14	24	72	75	80	48	20	333
Laguna Beach	293	300	300	303	378	344	344	2,262
Laguna Hills	185	188	254	323	268	307	324	1,849
Laguna Niguel	574	743	812	925	934	1,129	1,029	6,146
Laguna Woods	—	—	—	—	—	15	16	31
Lake Forest	176	201	257	292	287	277	218	1,708
Los Alamitos	37	55	19	19	15	17	33	195
Midway City	16	23	10	19	21	23	14	126
Mission Viejo	694	683	741	949	885	943	875	5,770
Newport Beach/Balboa	280	346	332	345	351	310	323	2,287
Orange	543	708	820	902	860	784	734	5,351
Placentia	129	179	205	180	185	188	163	1,229
Rancho Santa Margarita	145	115	208	0	165	188	244	1,065
San Clemente	377	421	350	523	505	425	427	3,028
San Juan Capistrano	206	212	194	313	246	278	287	1,736
Santa Ana	698	796	797	826	731	695	515	5,058
Seal Beach	39	35	29	38	32	19	26	218
Stanton	23	23	28	18	23	25	11	151
Trabuco Canyon	103	101	109	173	159	138	146	929
Tustin	240	251	314	340	263	247	248	1,903
Villa Park	97	126	147	172	173	152	153	1,020
Westminster	238	245	244	285	234	228	180	1,654
Yorba Linda	312	313	394	545	474	459	436	2,933
Unincorporated (Various)	10	5	9	223	5	84	154	490
Totals	9,418	10,651	11,589	13,178	12,490	12,088	11,556	80,970

The Orange County Public Facilities and Resources Department (PFRD) has a successful ongoing program of weed abatement. Weed areas that present a danger of fire are identified by PFRD and are cleared by the county if homeowners refuse to do so after appropriate notification. PFRD keeps a database of each year's activity, e.g., vacant lots ordered cleared, which facilitates future inspections. Costs for weed abatement and the associated administrative costs are passed on to property owners who fail to voluntarily comply with weed abatement orders. A similar approach could be used by OCVCD.

The Orange County Fire Authority (OCFA) reviews development plans to evaluate the fire safety of plantings around new home construction. OCFA has worked with landscape organizations and conservationists to develop a comprehensive list of plantings that are ecologically appropriate, aesthetically pleasing, and fire retardant. Unfortunately, when this extensive planting list was compiled by OCFA, the control of vectors was not taken into consideration, nor was the OCVCD a part in the planning and development of the list of plantings.

METHOD OF STUDY

The Grand Jury conducted interviews with administrative, technical, and operational staff of OCVCD, PFRD, and OCFA. The Grand Jury also reviewed data on rat complaints. The *California Health and Safety Code* was reviewed, as well as other sources of information provided by the three entities cited above.

FINDINGS

Under *California Penal Code* Section 933 and Section 933.05, responses are required to all findings. The Orange County 2001-2002 Grand Jury arrived at three findings:

1. Rats are a continuing problem as evidenced by a high number of complaints to the Orange County Vector Control District. OCVCD has the authority to enforce the provisions of the *California Health and Safety Code* to abate, as public nuisances; overgrown plantings which harbor rats; however, OCVCD does not enforce these provisions.

A response to Finding 1 is required from the **Orange County Vector Control District**.

2. The Public Facilities and Resources Department appears to have an effective weed abatement program that ensures clearance of weeds that pose a fire hazard.

A response to Finding 2 is required from the **Board of Supervisors** and requested from the **Public Facilities and Resources Department**.

3. The Orange County Fire Authority worked effectively with professional landscapers' associations and environmentalists to develop a list of acceptable plantings that deter fires. However, OCVCD was not asked to participate in developing the list so that recommended plantings would discourage rat harborage.

A response to Finding 3 is required from the **Orange County Fire Authority**.

RECOMMENDATIONS

In accordance with *California Penal Code* Section 933 and Section 933.05, each recommendation must be responded to by the government entity to which it is addressed. These responses are submitted to the Presiding Judge of the Superior Court. Based on the findings, the 2001-2002 Orange County Grand Jury recommends that:

In regard to Finding 1:

1. Enforce those sections of the *California Health and Safety Code* that deal with the clearance and maintenance of public nuisances that harbor rats;
2. Develop a plan to perform annual inspections and issue abatement orders;
3. Hire the staff necessary to perform annual inspections; and
4. Develop a methodology to recover costs from non-complying property owners.

A response to Recommendations 1 through 4 is required from **the Orange County Vector Control District**.

In regard to Finding 2:

5. Share information and databases with OCVCD to ensure the economies of scale of joint cooperation

A response to Recommendation 5 is required from the **Board of Supervisors** and requested from the **Public Facilities and Resources Department**.

In regard to Finding 3:

6. Include OCVCD on future revisions to OCFA's list of suitable plantings to ensure that recommended plantings are inhospitable to rats.

A response to Recommendation 6 is required from the **Orange County Fire Authority**.



Figure 1

Untrimmed palm fronds provide harborage for rats.