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## Feral cat management

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## Letters to the Editor

#### Feral cat management

We applaud McCarthy et al<sup>1</sup> for their research addressing a critical issue in feral cat management. We concur that feral and free-roaming cats pose myriad problems for people and the environment. However, we believe that the authors overlooked several important factors when concluding that trap-vasectomy-hysterectomy-release (TVHR) "should be recommended as a humane and more effective method of decreasing population size."

First, the population model used in the study does not represent a typical managed feral cat colony. Inclusion of self-imposed restraints on colony size attributable to a hypothetical carrying capacity restricts the population from reacting naturally to resources or control efforts. The model's lack of immigration and emigration restricts its application solely to small island situations. Likewise, the model does not appear to account for recapture of animals already treated in the population.

Second, the model does not realistically account for methods typically used in lethal control. The model's lethal control methods are limited to a trap-euthanasia program within a few short time periods. Although a program with a few short time periods of control may be appropriate for a trap-neuterrelease or TVHR program, because of the need to have surgical procedures performed, the model in our opinion incorporates a misapplication of lethal control with the result that the overall effort (ie, total time expended) for lethal control is too low.

Third, the model leaves males hormonally intact and sexually active, sustaining dominance hierarchies that ultimately can lead to overdispersion. That is, cats could spread further because of despotism.

Fourth, although TVHR programs could be successful with low capture probabilities, they would,

according to the model, take nearly 11 years for success, which is unacceptably long given the depredation pressures that remaining cats place on native wildlife and the risks they pose in regard to disease spread and potentially serious human health impacts. Considering that cats kill billions of native animals each year,<sup>2</sup> this is unacceptable. Likewise, leaving cats in the environment does not reduce the risk of diseases such as toxoplasmosis and rabies.<sup>3</sup>

Fifth, any model of feral cat control eventually works under conditions of zero immigration and inaction. However, zero immigration is unlikely except on small uninhabited islands. Even then, considerable damage can be expected to accrue until the population is extirpated.

Sixth, the authors suggest that lethal control is unacceptable to most people, but a recent study<sup>4</sup> demonstrated that many stakeholder groups accept humane lethal control measures for feral cats.

Seventh, the authors do not account for economic costs associated with the control methods. In fact, lethal control is much more cost-effective than trapneuter-release programs. Thus, capturing and removing 90% of individuals may still be more cost-effective and may reduce the population more rapidly than a TVHR program.

Finally, long-lived cat colonies are convenient public dumping grounds of unwanted cats. Finding solutions to managing feral and free-roaming cats requires looking less at colony management and more at public policy decisions that allow colonies to persist. Current control methods amount to triage, with little incentive for promoting responsible pet ownership such as keeping cats indoors and requiring them to be neutered and spayed.<sup>6</sup>

We have done better at managing the feral dog problem in the United States because feral dogs so clearly threaten human health. We can do the same with cats by valuing them as indoor pets.

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Letters containing defamatory, libelous, or malicious statements will not be published, nor will letters representing attacks on or attempts to demean veterinary societies or their committees or agencies. Viewpoints expressed in published letters are those of the letter writers and do not necessarily represent the opinions or policies of the AVMA.

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- McCarthy RJ, Levine SH, Reed JM. Estimation of effectiveness of three methods of feral cat population control by use of a simulation model, J Am Vet Med Assoc 2013;243:502-511.
- Loss SR, Will T, Marra PP. The impact of free-ranging domestic cats on wildlife of the United States. Nat Commun 2013:4:1396.
- Gerhold RW, Jessup DA. Zoonotic diseases associated with free-roaming cats. Zoonoses Public Health 2013;60:189-195.
- Lohr CA, Lepczyk CA, Desires and management preferences of stakeholders regarding feral cats in the Hawaiian Islands, Conserv Biol 2013;in press.

- Lohr CA, Cox LJ, Lepczyk CA. Costs and benefits of trap-neuter-release and euthanasia removal in urban cat programs: the case of Oahu, Hawaii. Conserv Biol 2013;27:64-73.
- Calver MC, Grayson J, Lilith M, et al. Applying the precautionary principle to the issue of impacts by pet cats on urban wildlife. Biol Conserv 2011;144:1895-1901.

#### The authors respond:

We appreciate the comments of Lepczyk et al regarding our recent paper. We note, however, that most of the comments are philosophical statements about cat control programs in general, rather than critiques of our model.

First, as far as we can tell, there is no such thing as a typical managed feral cat colony. By definition, models are simplifications of the real world, so there will always be something that can be criticized in a model. Our model evaluated a closed population, which allowed us to address a single research question. Adding migration would allow asking another question, which in fact we are presently pursuing. That being said, although migration will certainly alter the absolute effectiveness of each of the procedures, there is no obvious reason to expect that migration would alter the relative success of the different methods. The model does account for recaptured animals; their status does not change once they have been neutered, so there is no impact on the outcome measures of the model.

Second, Lepczyk et al seem to suggest that because lethal control methods are likely to be performed more frequently than several times per year, the model underestimates the potential effect of this method on population numbers. However, we made comparisons controlling for capture effort, and our results differed little based on how effort was distributed across the year (unpublished data). Having different control efforts for the different methods would change the results, but make comparisons less meaningful, unless controlling for another factor, such as money spent on the control effort. We chose the trapping pattern for a typical trap-neuter-release (TNR)

program, but the model allows the pattern to be changed to fit any situation.

Third, we assumed that vasectomized males would behave like fertile, sexually intact males. If there are data to indicate otherwise, Lepczyk et al do not cite it.

Fourth, one of the findings of our model is that, at least within the constraints of the modeled system, trap-vasectomy-hysterectomy-release (THVR) controlled cat populations faster than did TNR or lethal control. If TVHR is too slow, then the alternatives are even worse.

Fifth, the assertion that "any model of feral cat control eventually works under conditions of zero immigration and inaction" is incorrect. Removing or neutering cats at a slow enough rate will never control a population. The rest of this comment is a criticism of cat control programs in general and not of our model.

Sixth, the comment that some stakeholder groups accept humane lethal control measures for feral cats is not a criticism of our model. Regardless, our model suggests that TVHR would work better than lethal control under most capture scenarios.

Seventh, our model is about population control, not the cost of control. That said, the issue of cost is not trivial, and the actual cost will differ by region and local situation. Even better would be a model that included the costs and values of ecological services provided by wildlife killed by cats.

Finally, we do not disagree that current control methods have been only of very limited success in decreasing feral cat population

numbers.

Management of feral cat populations is a matter of substantial controversy, with many parties invested in the debate. Social, legal, economic, and biological issues all must be considered. Our contribution was to only one aspect of the problem, and it certainly will take more than a single model to resolve the issue.

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# What's the difference between an ovariohysterectomy and a spay?

Over the years, I have sometimes heard leaders of various humane organizations refer to ovariohysterectomy as a safe and simple procedure, but anyone who has ever looked deep into the abdominal incision of an 85-lb Rottweiler that was 50 days pregnant would never call this procedure safe and simple. I remember visiting a colleague's clinic one day while he was performing surgery. I asked him what he was doing, and he told me he was performing an ovariohysterectomy. What's the difference between that and a spay, I asked. "About a hundred dollars," he replied.

Back in the days when vaccinations were a major source of income for many private practitioners, we practically gave away our services when it came to spays and castrations. All those \$35 dog spays and \$10 cat castrations. We placed little value on our surgical skills, and as a result, neither did our clients. This kind of attitude has a way of coming back to haunt us.

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## More on AVMA governance changes

We appreciate the comments from Goldman et al<sup>1</sup> regarding recently proposed changes to the AVMA governance structure. They identified the principal conundrum related to the current AVMA governance structure—namely, that the AVMA is an organization funded by its members but that is governed as a federation through entities that do not financially support the AVMA.

True federations are financially supported by dues from member organizations, with individual members having interlocking memberships in local, state, and national organizations or other affiliates. In contrast, member organizations are generally supported by dues from individual members and give those individual members direct representation in the organization's affairs, without an interlocking membership requirement.

Members of the AVMA Task Force on Governance and Member Participation (TFGMP) wrestled with the competing interests posed by the current hybrid AVMA structure (federation vs individual member) when developing their proposed changes to the AVMA governance structure. They decided not to modify the current structure, but instead identify functions important to members who pay dues and then devise an organizational structure that put member needs and responsiveness to individual members first. There was considerable concern about the substantial number of AVMA members who are not members of a state or allied organization represented in the AVMA House of Delegates (HOD) and who are, therefore, disenfranchised as individual members. The TFGMP's final report and the model it proposed is what the authors of the letter

The governance structure proposal developed by the TFGMP has now been passed to the Governance Engagement Team (GET), which has been charged with modifying it to incorporate feedback from members, the HOD, and other entities. The GET report, which includes the modified proposal, has been available on the AVMA website<sup>2</sup> since October 15 for member comment. This revised governance model includes a modified HOD with members directly elected by AVMA members in the states and allied organizations represented in the House. It also includes a Veterinary Issues Forum, originally envisioned by the TFGMP to allow all interested parties (including those not

to the editor are addressing.

represented in the HOD) to come together and discuss issues important to the veterinary profession. This would expand the current open session of the HOD to allow for broad environmental scanning that would incorporate input from interested AVMA members and representatives of veterinary organizations, AVMA leadership, and AVMA councils on specific policies and issues before or during policy development, rather than after extensive policy development has occurred.

Member associations must evolve to meet the current and future needs of their members, many of whom are more engaged and more technologically connected than ever before. We believe that an individual membership model, under which all AVMA members can express their thoughts directly or in collaboration with others, will be the most successful to get us to that vision. We further believe that a pure federation governance model, while successful since its introduction in the 1930s, will not continue to meet the future needs of AVMA members. The comment period on the revised model in the GET report will close on November 15, but even after that date, we hope that AVMA members will contact the delegates and alternate delegates of their state and allied organizations, the members of the AVMA Executive Board, and the members of the GET with their thoughts and preferences as we face this crucial fork in the road for the AVMA.

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AVMA. AVMA Governance Engagement Team. Available at: www.avma.org/About/Governance/Pages/AVMA\_Governance\_Engagement\_Team.aspx. Accessed Oct 15, 2013.