Profile of Human-Rabid Skunk Contacts in Arkansas: 1977-1979

Dale V. Ferguson  
*University of Arkansas at Little Rock*

Gary A. Heidt  
*University of Arkansas at Little Rock*

Follow this and additional works at: [https://scholarworks.uark.edu/jaas](https://scholarworks.uark.edu/jaas)

Part of the Population Biology Commons

**Recommended Citation**
Available at: [https://scholarworks.uark.edu/jaas/vol34/iss1/35](https://scholarworks.uark.edu/jaas/vol34/iss1/35)

This article is available for use under the Creative Commons license: Attribution-NoDerivatives 4.0 International (CC BY-ND 4.0). Users are able to read, download, copy, print, distribute, search, link to the full texts of these articles, or use them for any other lawful purpose, without asking prior permission from the publisher or the author.

This General Note is brought to you for free and open access by ScholarWorks@UARK. It has been accepted for inclusion in Journal of the Arkansas Academy of Science by an authorized editor of ScholarWorks@UARK. For more information, please contact scholar@uark.edu, uarepos@uark.edu.
Table 1. General Behavior of Rabid Skunk

<table>
<thead>
<tr>
<th>BEHAVIOR</th>
<th>1977</th>
<th>1978</th>
<th>1979</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive</td>
<td>12(17)</td>
<td>63(60)</td>
<td>122(46)</td>
<td>197(48)</td>
</tr>
<tr>
<td>Unafraid but not aggressive</td>
<td>6(18)</td>
<td>14(13)</td>
<td>54(20)</td>
<td>74(18)</td>
</tr>
<tr>
<td>Disoriented or sick</td>
<td>11(33)</td>
<td>15(14)</td>
<td>62(23)</td>
<td>88(22)</td>
</tr>
<tr>
<td>Normal</td>
<td>11(3)</td>
<td>4(4)</td>
<td>6(2)</td>
<td>11(3)</td>
</tr>
<tr>
<td>Dead</td>
<td>3(9)</td>
<td>10(9)</td>
<td>25(9)</td>
<td>38(9)</td>
</tr>
</tbody>
</table>

1 - Parenthesis indicates percentage

Table 2. Have Other Skunks Been Seen Behaving in a Similar Manner?

<table>
<thead>
<tr>
<th></th>
<th>1977</th>
<th>1978</th>
<th>1979</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>9(29)</td>
<td>28(27)</td>
<td>69(26)</td>
<td>106(26)</td>
</tr>
<tr>
<td>NO</td>
<td>22(71)</td>
<td>76(73)</td>
<td>199(74)</td>
<td>297(74)</td>
</tr>
</tbody>
</table>

1 - Parenthesis indicates percentage

LITERATURE CITED


PEGGY RAE DORRIS. Department of Biology, Henderson State University, Arkadelphia, Arkansas 71923.

PROFILE OF HUMAN-RABID SKUNK CONTACTS IN ARKANSAS: 1977-1979

In recent years, rabies has become a serious problem in the striped skunk (Mephitis mephitis) population of Arkansas. With 98 positive cases in 1977, 140 in 1978 and 297 in 1979, Arkansas ranks first in the number of skunk rabies per square mile. The Arkansas Department of Health, in 1979, declared rabies in striped skunks to be of epidemic proportion. This paper presents a profile of human contacts with rabid skunks over this three-year period.

Using information gathered from the Arkansas Department of Health, those individuals who had contact with laboratory-confirmed rabid skunks were interviewed either by questionnaire or by telephone in an effort to determine the behavior of the skunk, the habitat in which the skunk was killed, time of day of the contact and whether or not other skunks had been seen behaving in a similar manner. Response to this poll varied from 40% in 1977, 80% in 1978 and 95% in 1979.

Table 1 summarizes the behavior of rabid skunks at the time contact was made. As can be seen, roughly half of the skunks behaved in an aggressive manner. Another one-third were either non-aggressive but unafraid or behaved in a sick or disoriented manner. These data agree with Richards’ (1957, North Dakota Outdoors 20:4-5, 16) observations that rabid skunks are “most aggressive and determined” than any other form of wildlife in their attacks on humans and on other animals. Table 2 indicates that most rabid skunks in the acute state of infection are solitary.

Table 3 identifies habitats in which the skunks were killed. Over half of the skunks were killed in and around buildings in the country. The striped skunk is increasingly being found in close approximation to human habitation (Verts. 1967. The biology of the striped skunk. Univ. Ill. Press. 218 pp.). The fact that such a large number of the rabid skunks were killed in and around buildings, further demonstrates the potential danger of rabies to human and domestic animals.

Most of the rabid skunks encountered in these three years (75%) were active during daylight hours (Table 4). To some degree, this may reflect human activity patterns. However, it clearly illustrates that the rabid skunk’s activity often deviates drastically from the normal nocturnal or crepuscular pattern.
SIGNIFICANT ADDITIONS TO THE MOLLUSCAN FAUNA OF THE ILLINOIS RIVER, ARKANSAS

In Gordon et al. (1980a), the molluscan fauna of the Illinois River in northwestern Arkansas was described. Thirty-nine taxa were listed. This faunal assemblage was compared to Branson (1967), the only other available report on the molluscan fauna of an Ozarkian west slope drainage, and some aspects of the local distribution of species endemic to the Interior Highlands were discussed. The distribution and identification of endemic forms and the Arkansas unionacean fauna have been further discussed in Gordon et al. (1980b). During the past year, additional samples were collected from the Illinois River and west slope drainages in Missouri (tributaries of the Neosho River). Methods were previously described (Gordon et al. 1980a).

Fusconaia osarkensis (Call) and Pisidium fallax Sterki have been identified from the Illinois River. Additionally, F. ozarkensis is reported for the first time from Kansas (Spring River), and the Kansas records of Call (1885-1887) and Scammon (1906) are confirmed for Actionna osarkensis fallaxformis (Conrad) (see Murray and Leonard, 1962) which appears to have been recently misinterpreted as Villoa iris (Lea) by Schuster and DuBois (1979). Within the larger drainage systems of the west slope of the Ozark Plateaus, the unionid fauna appears to be fairly similar (Table 1).

The Interior Highlands are composed of two separate geological assemblages which have been shown to possess a distinct endemic molluscan fauna (van der Schalie and van der Schalie, 1958; Gordon et al. 1980b). Of the eight endemic taxa of Unionidae, six are known to occur in the Ozark Plateaus, four of these six are restricted to the Ozark Plateaus, and the other two are distributed throughout the region (Ptychobranchus occidentalis [Conrad] and Cyprogenia aberti [Conrad]). The remaining two species, Actionna wheeleri Orthmann and Walker and Villosa arkansana (Lea), are restricted to the Ouachita Mountains (Gordon et al. 1980b). Collections from the areas adjacent to the Illinois River have shown Lampellis reeveiana (Lea) and Actionnaia ellipsiformis pleisi (Marsh) to be present in the southern Ozarkian drainage of the White River but not the west slope drainages represented by the Illinois, Elk, and Spring rivers. Likewise, L. reeveiana Frierson occurs throughout the west slope drainages (Table 1) but not in the White River. Fusconaia osarkensis is common to both the south and the west slope drainage systems.

Three natural unionacean faunal subdivisions appear to be present in the Ozark Plateaus. The west slope fauna is typified by F. ozarkensis and L. reeveiana. The fauna south of the Ozark Crest is composed of F. osarkensis, A. ellipsiformis pleisi, and L. reeveiana. North of the Ozark Crest, the only endemic unionid is L. reeveiana. The overlap within these subdivisions and the presence of the two wide-spread species illustrates the close affinity of the fauna.

Further observations of the unionid fauna suggest some additional associations. Cyprogenia aberti is generally distributed throughout the Interior Highlands and west into Oklahoma and Kansas (Gordon et al. 1980b) and has been found throughout the Spring River system. For reasons not yet understood, C. aberti is present in the Illinois River, although it may occur only downstream in Oklahoma. Similar distribution patterns are reflected in the occurrence of several other species listed by Branson (1967) for the lower Spring River (see Table 1). Also, Alasmidonta marginata Say and A. calceola (Lea) have been collected from the Elk and Spring rivers (Table 1). They are known historically from the White River (Gordon et al. 1980b). Baker (1928) has noted a close distributional association between these two species of Alasmidonta. The small size and habit of burrowing into the substrate by A. calceola make it difficult to find (Utterback, 1915; Baker, 1928). Alasmidonta marginata was found in the Illinois River; therefore, it is postulated that A. calceola also occurs in the Illinois River.

Pisidium fallax generally has been considered a northern species. With exception of a single record from Alabama, it had not been found south of the extent of maximum glaciation. Its presence in the Illinois River and several adjacent drainages represents a new regional record for this species (Gordon et al. 1980c). These records and Wheeler’s (1918) observations on the Ouachita Mountains molluscan assemblage illustrate the need for further study of the Sphaeriidae within the Interior Highlands. Pisidium fallax easily may be mistaken for P. casertanum or P. compressum. Its designation as the “deceptive” (from the Latin, fallax) Pisidium appears to have been appropriate.