INDICATORS OF EMOTIONAL AROUSAL IN THE STRUCTURE OF DEFENSE CALLS OF GREAT GERBILS (RHOMBOMYS OPimus LICHT)

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INTRODUCTION
The increase of emotional arousal leads to changes in the structure of calls of different species of mammals and people. However, there is very few information about what parameters respond for the expression of the emotional arousal in the calls. In present study we designed aggressive male-male conflicts in Great Gerbils on neutral arena. Soon one of the males became a winner and after that the winner pursued the loser. The loser demonstrated the behavior of submission and cried.

The aim of our study was to assess how the structural parameters change with increasing of emotional arousal.

METHODS

1. Decrease of duration
2. Increase of 10 beg, 10 max and frequency modulation
3. Increase of 1 peak

RESULTS

Comparison of changes in the structure of calls in great gerbils and other species of mammals with increasing of emotional arousal

<table>
<thead>
<tr>
<th>Duration of sounds</th>
<th>f0*</th>
<th>Energy of sounds **</th>
</tr>
</thead>
<tbody>
<tr>
<td>Great Gerbil (Rhombomys opimus)</td>
<td>DOWN</td>
<td>UP</td>
</tr>
<tr>
<td>Pallid gerbil (Gerbillus peraolidus)</td>
<td>UP</td>
<td>UP</td>
</tr>
<tr>
<td>Other species of different orders of mammals (primates, carnivore, rodent, hoofed mammals) and humans</td>
<td>UP</td>
<td>UP</td>
</tr>
</tbody>
</table>

CONCLUSION
A shift of energy to higher frequencies with increased emotional arousal is the indicator of emotional arousal in Great Gerbils. Our results agree with results of other studies for different species of mammals and people. Thus, a shift of energy to higher frequencies may be the most universal indicator of increasing emotional arousal for mammals.

ONLY FOR TONAL CALLS \ FOR CALLS WITH ANY STRUCTURE