

## **Guideline for Ethological studies**

The ethical committee for animal experimentation of the Japan Ethological Society established the following guideline for ethological studies. . The members of the society should follow the guideline the committee issued here in conducting animal experimentations.

### **1. Purpose**

Ethological studies are necessary in gaining knowledge in evolution, adaptation, mechanisms, and development of animal behavior. Such studies are conducted either in the wild or under the captivity of animals. Studies may involve not only non-invasive behavioral observations, but also giving experimental manipulations that could range from assigning a different condition to more invasive treatments that might involve a burden to the animals. Mere observations could give a psychological or physiological harm to the animals if appropriate care is not taken. Researchers should pay every effort to keep the adverse effect on the animals and the environment minimum when conducting scientific research. In this guideline, we show necessary precautions in conducting ethological studies. In addition, we urge the researchers to pay attentions to ethical issues in animal experimentations.

### **2. Relevant laws**

Researchers must conduct their research in compliance with relevant laws and institutional guidelines.

### **3. Animals as defined in this guideline**

“Animals” in this guideline refer to any animals (vertebrate and invertebrate) that may be used in the research.

### **4. Preparation of the research plan**

In preparing the plan for scientific research, researchers have to select appropriate research animals and methods for the purpose they want to pursue. In case of the research plan which requires keeping of animals in the laboratory, it is necessary to satisfy the required conditions for healthy and non-stressful keeping. In addition, it is essential to obtain advice from experts of the subject animals. Invertebrate animals are often not subject to the law concerning the scientific study. However, even when these animals are used, it is desirable to make an effort to prepare the plan that minimizes the pain and distress to the animals.

### **5. Number of animals for study**

Researchers should use the minimum number of animals within the extent that the purpose of the research shall be attained.

### **6. Obtaining animals for experimental studies**

When purchasing animals for research, they must be obtained from

appropriate suppliers. When capturing wild animals in the field, it is necessary to capture them in a humane manner to minimize the pain and distress. The act of capturing should be performed with the minimum impact on the ecosystem.

#### 7. Animal keeping

When it is necessary to keep animals in the laboratory or in the field station for the experimental purpose, the researcher should pay as much attention as possible to keep them in a proper environment with the considerations on behavioral characteristics of the animals. In keeping wild animals, the stress level of the animals should always be monitored and always try to improve their housing environment.

#### 8. Research Methods

- (1) Researchers have to minimize the magnitude and duration of pains for subject animals. In experimental treatments, it is desirable to decrease those pains with daily training, habituation, appropriate anesthetics, and other appropriate procedures.
- (2) Researchers have to acquire sufficient skills at working on subject animals.
- (3) In field studies, it is desirable to minimize adverse or painful effects on animals derived from capturing, marking, attachment of telemetry or data logging devices, blood or tissue samplings, and other procedures.
- (4) In experimental studies on aggressive behavior between or within the species, it is desirable to decrease the number of killed or injured animals as small as possible by securing escape route or protective fences for the animals being attacked.
- (5) Researchers are required to give attentions to animal health and to keep the degree of aversive stimuli or deprivations within a moderate range not any stronger than absolutely necessary.
- (6) The duration of social isolation or the degree of overpopulation should be made as short as possible along with the purpose of the studies.
- (7) In infectious treatments with bacteria or parasites, it is desirable to observe animal conditions as frequently as possible. If health deterioration is found, appropriate medical treatments or euthanasia should be given to the animals. In experiments using physical and chemical materials or pathogenic organisms, researchers have to make sufficient considerations on keeping human safety and getting away non-experimental animals from any troubles originated from pollutions of the captive environment. It is also necessary to give attentions in antipollution of periphery of experimental facilities.

#### 9. Steps to be taken after the research

At the conclusion of the study, taking the following steps is advised.

- (1) Changes caused by the experimental manipulation to the animals or to the environment should be immediately returned to the original condition.
- (2) When wild-caught animals are used it is desirable to consider that the animals be transferred to other researchers or used for breeding if it is legally accepted to do so.
- (3) If there is no worry of harm to the experimental animals, to the animals living

in the environment, or to the environment itself, it is advised to release the experimental animals to the site where they were originally caught.

- (4) When it is absolutely necessary to kill the subject animals, a method that minimizes the pain and distress of the animals shall be used.