SAMPLE HUMBOLDT STATE UNIVERSITY

INSTITUTIONAL ANIMAL CARE AND USE

PROTOCOL ROUTING SLIP

The attached protocol for the humane care and use of live vertebrate animals was submitted on

Date of submission (date) by Name of "**Faculty**" Sponsor (faculty project leader) for e.g. WLDF 495… (course # if appropriate)

Check whether the work described in this protocol will be supported by funding administered by the ( )HSU Foundation, ( ) another administrative unit -*list*_____,or ( ) will be unfunded.

Animals used for this project will be housed in the following facilities (please check all that apply):
( ) Animal Rooms; ( ) Fish Hatchery; ( ) Game Pens; ( ) Telonicher Marine Lab;
( ) Natural History Museum; ( ) Other, specify site and room _____

Person / phone number (or e-mail) to contact: (author's name and email address here)

Project Title: (Title must be same here as in your answer to question 1 below)

♦ **ROUTE FIRST TO THE CHAIR OF THE IACUC,** ASSOCIATE DEAN OF THE COLLEGE OF NATURAL RESOURCES AND SCIENCES (RM. 106C IN THE FORESTRY BUILDING). Please allow ten working days for review of proposals to conduct minimally invasive procedures and an excess of one month for review of proposals to conduct invasive procedures; note that these time periods are minimal and assume that no revisions will be necessary prior to approval. ALWAYS VERIFY APPROVAL (OFFICE OF THE CHAIR OF THE IACUC; 826-3256) BEFORE STARTING YOUR PROJECT.

****************LEAVE THIS BOX BLANK AS IT IS FOR COMMITTEE USE ONLY****************

THE REMAINDER OF THIS PAGE IS FOR THE USE OF THE INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

Date 1st Received _____ **REVIEW** No. ___/___.____.____-____

( ) E- Procedures are exempt from full IACUC review because they are purely observational, non-invasive, and produce no perceptible discomfort or they concern only the use of tissues from dead animals. To be considered exempt, tissues from dead animals must be obtained from animals euthanatized or otherwise killed by means, and for purposes, unrelated to the proposed project. The procedure may be approved by the Chair and the Campus Veterinarian.

( ) A- Procedures will be minimally invasive or produce relatively little discomfort. Protocols may involve, bleeding, injections, minimal sampling, anesthesia or humane euthanasia without prior invasive manipulation. The procedure may be approved by the Chair, the Campus Veterinarian, and one additional member of the IACUC. Project topics will be reviewed by the IACUC at the next scheduled meeting.

( ) B- Procedures will involve prolonged manipulation or be invasive. Protocols may involve surgical or other stimuli inducing pain or distress, but all pain or distress will be mitigated with appropriate anesthetics or analgesics. The procedure may be initially approved by the Chair, the Campus Veterinarian and one additional member of the IACUC. Protocols will be reviewed by the IACUC at the next scheduled meeting.

( ) C- Procedures will be invasive and may cause prolonged physiological or psychological stress. Pain, considerable distress, or discomfort may be induced and not mitigated by anesthesia or adequate analgesia (e.g. LD50 experiments, long-term food or water deprivation, etc.). These protocols will be reviewed thoroughly by the IACUC prior to commencement of the project.

_____
Signature, IACUC Member Date ( ) Approved ( ) Denied

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Signature, IACUC Member Date ( ) Approved ( ) Denied

_____
Signature, IACUC Chair Date ( ) Approved ( ) Denied

Routing slip revision 05/08

cc: ( ) Project Leader, ( ) Animal Facility Supervisor, ( ) Department Chair

PROTOCOL FOR THE HUMANE CARE AND USE OF LIVE VERTEBRATE ANIMALS

Federal animal welfare regulations require that an Institutional Animal Care and Use Committee (IACUC) review and approve all activities involving the use of vertebrate animals prior to their initiation. This includes any animals used for the development of experimental methodologies, instructional purposes, research, etc. Approved protocols for ongoing and recurrent activities must be reviewed by the IACUC on an annual basis. However, extensions and amendments requiring an abbreviated application process may be granted for a total of three consecutive years. Compliance with animal welfare regulations is mandatory and is the responsibility of all individuals (including faculty and students) who choose to work with live vertebrate animals.

To avoid the proliferation of submissions, please provide generic descriptions (including multiple routes of compound administrations, minor procedural variations, similar laboratory exercises from a single course, routine exercises used in several courses, etc). When multiple vertebrate species are to be used, please clearly describe all procedures, and all variations thereof, to be used with each individual species.

Once completed, signed, and dated, please submit your protocols to the Chair of the IACUC, Associate Dean of the College of Natural Resources and Sciences, Forestry Bldg, Room 106C. All protocols should be submitted on the most recent version of the forms. For your convenience, protocol forms are available in several software formats from the Chair of the IACUC, from several department offices and stockrooms, and they can be downloaded from the IACUC web page (http://www.humboldt.edu/~iacuc). You can expedite the review process by following these formatting rules: avoid changing the format of the routing slip unless minor reformatting is necessary to keep it to a single page; leave an extra blank line between your answers and the questions; leave questions in bold-face type; type your answers in regular (non-bold) type; and format the final signature page so that it begins with the final question. Please contact the Campus Veterinarian, Dr. Richard Brown, (by phone-826-3320, or e-mail- RNB2@humboldt.edu) with questions concerning protocol preparation and submission.

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1. Course Number (if applicable)**.**

Project Title (note that this title must match the title shown on the routing slip)**.**
This title must be identical to that listed on the routing slip

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2. Responsible Faculty Member: Instructor, Principal Investigator or Project Director.

Name Faculty member

Department Biological Sciences, Fisheries Biology, Psychology, Wildlife…

3. Names of others involved in animal use activity and their qualifications to perform the procedures indicated.

This answer should include all researchers, technicians, students, and others that will be responsible for independent animal handling or "use" other than the responsible faculty member listed above. Students who are in classes that will be supervised by a responsible faculty member (or someone listed in this answer) do not need to be listed here. Protocols written by students should be written in the third person as such protocols are the description of work overseen by the supervising faculty member. Students should state their name and qualifications to conduct the work; qualifications include class status, and any pertinent courses (e.g. Wildlife Techniques) or relevant work experience.

4. Proposed starting date (the starting date cannot precede date of approval, and note that *all* protocols must be renewed or extended annually). The Annual Protocol Review Form must be approved on or before the anniversary of the approval date to indicate termination of the project or to request extension of the dates of approval; annual review is automatic and you no longer need to submit an end date.

All that is required is the date on which you plan to begin your work; and you will be approved for a full year regardless of the intended duration of your project. We recommend that you write "date of approval" if you wish to get the earliest approved start date.

Be sure to confirm approval **before** you collect any data (you can call 826-3256 to ask the administrative assistant whether your protocol has been approved). Failure to do so may be considered scientific dishonesty (analogous to falsifying or making-up data). Often, the start date is written as "date of approval" to allow the earliest possible start date. Annual review is automatic, and each PI will be required to submit a signed Annual Protocol Review Form prior to the end of the proposed project to indicate whether they are seeking project renewal or termination. Note that the IACUC is not authorized to approve project durations for longer than one year. However, full protocol review is only required once every three years. Therefore, approval for continuation of work beyond the first or second year can be applied for using the Annual Protocol Review Form.

5. Scientific name, common name, and characteristics of all species to be used. List multiple species separately to explain variation in use. For field studies, please list all target species, species listed as protected, threatened, or endangered by the USFWS or the state in which the work will be conducted, and any non-target species that are likely to be impacted.

Latin binomial	**Common name**	**Sex**	**Age or Weight Range**
The committee will help confirm that you are using the appropriate sex and age of animal.			
List each separately	M &/or F		ex: neonates, adults, or adults and all juveniles > 50 gm …)

This is clear enough for laboratory work or when someone is working with one or a few species. However, folks who are sampling large numbers of species in the field are often unsure how to answer this question. If you are not sure what might be sampled, you should clearly list your focal animal species, any non-target species that are likely to be affected, and any threatened or endangered species that might be "taken." "Take" is a technical term from Section 3(18) of the Federal Endangered Species Act and specifically means "… to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct."

6. **Number of animals to be used. Explain why a smaller number would not allow you to meet your objectives (please provide clarification if based on statistical reasoning).** If this is a field project, and you cannot predict the exact number of animals to be sampled, please give your best estimate and an explanation of the variables that will determine your sample size. Write N/A if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

   This answer should include an explanation of your study design and the rationale for the number of animals to be "used;" for our purposes, use includes any involvement of animals in research or teaching. One concern of the Committee is that too few animals may not provide adequate information, whereas too many animals may lead to unnecessary risks, pain, stress, or other types of suffering.

   For field studies where the exact number to be sampled is not known, you will need to give your best estimate and explain the logic that you've used to generate the estimate. Researchers should consider the effort necessary to accomplish the goals of their study designs, and this question is simply asking you to document the logic behind your level of effort. You also may write up your proposal as a pilot study and note that a future protocol will be submitted to allow a larger sample size or adjustments to the study design.

   Note that you should only write N/A if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

7. **Source of the animals (or tissues) to be used or the study area(s) for field studies.** For transportation, storage, and use of tissues from carcasses, explain the circumstances of death. If this information is unknown, provide the name and contact information for the person or company from which the samples are to be obtained.

   This question is intended to ensure readers that animals (including dogs & cats used for research) are obtained from proper sources. If yours is a field study, just indicate that the animals all are free-living or wild, and state the area(s) from which they will be sampled. If you will be obtaining tissues or carcasses, indicate their source. It is important to identify whether the animals are to be specifically killed for your research project or if the animals are to be killed for other reasons and that you have either opportunistically obtained the samples (as from hunter killed animals), or if your are purchasing the tissues from a supplier.

8. **If live animals are to be maintained in captivity for greater than 12 hours, explain where and how the animals will be housed and who will be responsible for their daily care.** If no animals will be maintained in captivity, please clearly state that to be the case. Write N/A if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

   Animals maintained in captivity for any reason must be housed in IACUC inspected and approved facilities. If any animals are to be maintained in captivity for $\geq$ 12 hours, please explain where and how the animals will be housed and who will be responsible for their daily care. If animals will be housed at the HSU Game Pens, then you can cite the Standard Operating Procedures for that facility. Otherwise, you will need to supply all of the relevant information concerning housing, cleaning schedule, feeding schedule, type of food to be given, etc. (basically all details needed to maintain the animal in captivity).

   If animals will be held for a short time (e.g., $\leq$ 15 minutes) and released at the site of capture during the process of live capture, briefly state that as well.

9. Provide a non-technical description of the proposed goals, general methods, and the educational or scientific objectives that the proposed use is designed to meet.

Provide a non-technical description of the goals of your research, the major methods used, and a justification of the value of your study. This is analogous to an **abstract version** of your detailed description below. Don't assume the reader has read your answers to questions 1-8 above. The non-technical description should be written using language that any educated person (but not necessarily someone educated in your discipline) would be able to understand.

10. Provide a complete and detailed description of all procedures to be performed involving live vertebrate animals. Your response should address the handling and restraint of non-anesthetized animals; deprivation of food or water for a period that is atypical for this species; use of chemical or biological agents; the drawing of blood; the use of anesthetics, analgesics, sedatives or tranquilizers; surgical procedures; exposure to radioactive materials, known carcinogens, or highly toxic substances; and any post-operative procedures. Write N/A if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

This section should include a **complete and detailed technical description** of all of the details that would allow a careful review of your intended methods. You should clearly explain any aspect of your study that would be likely to cause pain, distress or other type of suffering; including all of the details related to animal housing, handling, and sampling. Include a brief summary of your goals, sampling design, and specific details concerning the "use" of any animals. You may find it helpful to copy the pertinent parts of your methods section from a proposal or paper and paste them here, but you should realize that you may still need to elaborate on the specifics concerning animal "use."

If this is an observational study of fish or wildlife, include those details that would allow a reviewer to fully understand the likelihood of your disturbing, stressing, or the altering of animal behavior. This should include a statement of the minimal distance to which you will approach your animals and your best estimate of the likelihood of any distress that you might cause.

If you will be baiting wild animals for any purpose, you will need to provide the details about the bait to be used (if commercially available, then include the name of the manufacturer and the location for purchase). Please note that the use of live bait animals will result in a "B" level assessment and require extra time for a full committee review.

If you will be capturing wild animals, you should include all pertinent information concerning the capture and handling of the animals. This should include the type of bait to be used (if commercially available, then include the name of the manufacturer and the location for purchase) number and type of traps, snares, or nets, details about the traps or nets (size of net mesh, length and width of mammal traps…). You should estimate the time necessary for handling and the specific plans for release or disposition.

If you will be bleeding animals, please note that the general rule is that the maximum volume of blood that can be drawn from a healthy individual is approximately 1% volume of its body weight. So, you can safely draw no more than 2 cc of blood from a healthy 200 gram woodrat and no more than 0.25 cc from a healthy 25 gram western sandpiper.

If you will be attaching radio transmitters to animals. You should include the range of body weights of the animals to which the transmitters will be attached. You should include the weight

of the transmitter and the % weight of the transmitter relative to the body weight of the smallest individual to which transmitters will be attached. Safe guidelines suggest that most species can carry a transmitter that weighs less than or equal to 3% of their body weight. Clearly, the smaller the transmitter the more likely the animal will not be affected by its weight or bulk. Larger transmitters may be permitted in specific circumstances, but you will need to support both the need for the larger transmitter and that you have safely used this weight transmitter previously either in the lab or field. You should clearly describe the transmitter (brand, model, and any modifications), and you should clearly describe the methods and materials used to attach the transmitters. If the transmitters are fitted with a band of material that will degrade or wear and break, you will need to describe such materials in detail. Researchers should either attempt to recapture their animals to remove transmitters, clearly explain how and when the transmitters would be expected to fall away from the animals, or provide adequate reasoning for leaving the transmitters on the animals indefinitely.

If you will be using electro-fishing to capture fish, please include the model of the units and the anticipated settings to be used. It would be helpful if you could also explain the margin of safety for non-target species, including amphibians, and any methods you plan to employ to minimize mortalities of such individuals.

If you plan to use firearms, please note the use of potentially dangerous weapons comes with a considerable liability for yourself and the school. You will need to clearly demonstrate that you have appropriate experience using firearms, and you will likely need to spend some time at a firing range with a range master who will certify your safe use of the weapons being proposed for the research.

If you will be anesthetizing animals (or using any chemicals directly applied to animals) for any reason, you will need to speak first with the campus veterinarian to discuss the drugs and monitoring being proposed.

You should include in this answer the details of the methods for restraint of non-anesthetized animals, deprivation of food or water for a period that is atypical for this species, use of chemical or biological agents, the drawing of blood, the use of anesthetics, analgesics, sedatives or tranquilizers, surgical procedures, exposure to radioactive materials, known carcinogens, or highly toxic substances, and any post-operative procedures.

Please note that the more potentially invasive your procedures the more detail and justification will be necessary for IACUC approval. We ask also that you emphasize the details of your "use" that will be non-invasive, and any specific steps you plan to take to minimize pain, suffering, or distress.

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11. Will any of these procedures cause pain or distress (other than that necessitated by collection, injection, and otherwise mild, momentary discomforts)? If so, please explain. Write N/A if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

Most student projects, and many of HSU's projects in general, do not involve significant distress or pain. For these protocols, a simple "No" should suffice here. However, if you do recognize that your work will cause distress, pain, or any potential suffering, you will need to clearly address methods taken to minimize the potential for such suffering and all steps taken to mitigate any pain or distress once it occurs.

Note that you should only write N/A if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

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12. <u>For researchers</u>, explain how you determined that this protocol does not unnecessarily duplicate previously published observations or experiments (cite the type of literature searches as well as any other resources used). <u>For instructors</u>, explain the value of the lesson that merits using live animals. Write N/A if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

The general goal of the branches of the federal government responsible for animal welfare is to minimize pain and suffering; e.g. the 3 Rs – replace, reduce, and refine:

Replace the use of animals with alternatives.

Reduce the numbers of animals when it can be done without compromising the statistical validity and outcomes of projects. When considering redections in numbers, investigators or teachers need to ensure that individual animals do not suffer more as a result of such reductions and that reduction does not result in unnecessary repetition of activities.

Refine to confirm that animals chosen are suitable for the study and appropriate methods and techniques are in place to minimize animal pain and distress. Responsible faculty members must ensure that all "use" of animals is done respectfully and with a goal of minimizing pain, distress, and suffering.

Students should cite and list the type (e.g., BIOSIS) and extent (years) covered in their literature search. Faculty conducting research may need a broader statement indicating their knowledge of the literature and the potential that they will unnecessarily repeat research involving animals. Obviously, the more invasive the procedures, the more details will be necessary to answer this question appropriately.

Note that you should only write N/A if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

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13. Provide alternative procedures that were considered and rejected as well as a brief explanation of why the alternative procedures were rejected. Write N/A if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

Alternatives to animal research are being promoted to minimize unnecessary pain and suffering (please refer to the 3Rs discussed above). Therefore, everyone must consider possible alternatives. If you have considered the possibilities, and you've found no acceptable alternatives, then justify your work and explain why you need to do the work as proposed. In some cases, field observations may be the only way to acquire the needed information. Likewise, invasive techniques are often required to accomplish the goals of the intended "use." In this case, the answer should clearly and directly explain why alternatives are more invasive, unpractical, or inappropriate.

14. Identify serious human health risks (expected exposures to disease agents, toxic chemicals used, dangerous environmental conditions, etc.) to which any participants might be exposed during the routine performance of the duties proposed herein, and describe steps taken to mitigate those risks.

- Many projects will result in little risk to the humans involved. If your project is one of these, then simply answer "none." If you can predict serious risks (use of toxic chemicals or firearms…), then you should explain the risks and the methods you are proposing to mitigate those risks. If you will be handling animals, you should consider zoonotic disease risks.

- For instance, everyone handling wild carnivores or bats should consider that they may be exposed to the rabies virus, and they must consider ways to mitigate the risks (avoiding being bitten and a vaccine…). When trapping rodents in Humboldt County, you may be exposed to animals carrying the agents that cause hantavirus, leptospirosis, or bubonic plague, depending on the rodent species and the site at which the trapping is done. To avoid these rodent borne diseases, workers should obtain adequate education about the risks of exposures; participation in class-related experiences with an expected risk of exposure should not be required or coerced; personal protective equipment (PPE), including disposable exam gloves, face shields, rubber boots, and the option of being fitted with HEPA-filtered masks, should be provided or you should have knowledge of where to purchase such items; students should not be allowed to clean dusty rooms where mice have been nesting (old field station rooms, cabins…) without proper PPE; traps with mice, dirty bedding, and the mice themselves should be handled out of doors whenever possible, and never in closed rooms with poor ventilation; people handling rodents or traps should position themselves so that the mouse and traps are kept downwind when working; people working traps should not stick their faces into traps to inspect the contents or for any other reason; soiled bedding, fecal material, dusts from dirty traps, and gloves should be disposed of in double-bagged garbage bags clearly marked as potentially infectious animal waste; traps should be cleaned with disinfectant (Lysol or 10% bleach), rinsed thoroughly, and allowed to air dry after each use and before storage (not necessarily each day, but certainly each time traps get packed up or returned to the stockroom); workers who develop progressive difficulty breathing, an unexplained fever, rash, or serious cough within 45 days of potential exposure should seek immediate medical attention; and the tick and insect vectors that transmit some infectious agents should be avoided.

- Fieldwork that brings a person into contact with ticks (e.g., *Ixodes pacificus)* brings some risk of exposure to Lyme disease and other tick-borne agents.

- Students and staff handling blood products or tissues of wild birds may be exposed to West Nile Virus and some other mosquito borne viruses. The animals should be handled with gloves. If the tissues or blood products are to be analyzed for West Nile Virus, the workers will need to clearly explain the handling of the blood (wearing gloves at all times, etc.) and the processing of the samples.

- Preparation of track plates (ie. smoking the plates with an acetylene torch) might lead to a risk of fire and the specific address and description of the site used for preparing the plates needs to be specified.

- Transportation in helicopters or use of scuba equipment, especially when related to wildlife monitoring or capture, needs to be explained in terms of the individual's level of safety training.

- Use of motorized boats presents a risk that needs to be approved by the boat safety committee.

- Use of firearms is associated with considerable liability and risk, and you will need to demonstrate adequate training and safety precautions to be taken to minimize risks.

- Please call the campus veterinarian or the Office of Environmental Health and Safety at HSU if you have any questions concerning the safety of your project. If we don't know the answers, someone will help you find them.

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15. Describe the fate of the animals upon completion of the protocol. Include the procedure for euthanasia (if chemical, include drug, route, and dosage) and the method of verification (whether necessary as an experimental termination or in the case of unanticipated, accidental injury). Note (1) that you must justify the scientific necessity for any variations from the established guidelines for euthanasia (2000 Report of the AVMA Panel on Euthanasia as published in the Journal of the American Veterinary Medical Association, 2001, 218(5): 669-696 or its replacement in the Code of Federal Regulations), (2) that you must report unexpected deaths to the IACUC as soon as possible to consider options, and (3) that you may write N/A only if this protocol covers only the transportation, use, and/or storage of carcasses or tissues.

Everyone choosing to work with live animals needs to take appropriate responsibility for their welfare. This includes preparation for dealing with unanticipated emergencies in the field as well as for planned termination of experiments. This preparation needs to conform to the guidelines written in the 2000 Report of the AVMA Panel on Euthanasia or the faculty member must adequately demonstrate that their choice of euthanasia methodology is required by the goals of their research. You also need to provide appropriate methods for confirming death once an animal has been euthanized (e.g. auscultation of the chest for heart beats using a stethoscope or monitoring for the absence of all signs of life, including breathing, for at least several minutes).

Exemptions include those studies that are purely observational and those involving species listed as Threatened or Endangered for which the responsible faculty member is not permitted to euthanize the animals. In these situations, you will only need to list the appropriate contact information for the local branch of the appropriate state or federal agency (e.g., "in the event an injured animal is encountered, I will contact the US Fish and Wildlife Service and ask for specific guidance of dealing the injured or sick study animal." You also might note the names and phone numbers of specific veterinarians or the Humboldt Wildlife Care Center.

You should also include a statement that any possible injuries result from your work will be reported to the campus veterinarian and that you will provide appropriate care for any injured animals. Likewise, if you are capturing wild vertebrates, you should state that you plan reassess your work should unpredicted injuries or mortalities occur and that all such occurrences will be reported to the IACUC.

Do not remove the following page break (the final page should remain as a final page)

16. **I certify that the above information is accurate and complete, that I have read and agree to abide by the "Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training at HSU," that I will make copies of these principles and other pertinent guidelines available to those persons who work under my supervision, and that deviations from this protocol, including any unanticipated injuries or death of animals, will be reported to the IACUC. Further, my level of supervision will be such that these procedures will be carried out in a humane and a scientifically acceptable manner as described herein. I understand that, as the research supervisor, I take responsibility for the conduct of anyone working under this approved protocol, and I will supervise the research to ensure that no work is conducted that is not covered herein or in a separate approved protocol. I am aware that my research might require permits from federal and/or state agencies that regulate the harassment, capture, transport, captive maintenance, handling and manipulation of live vertebrate animals, and I have marked all boxes pertaining to the relevant laws (and state permits) governing the species used in my research. I certify that my research will be conducted in accordance with all relevant federal and state laws.**

I am aware that the following Acts apply to my study (check all that may apply):

( ) **Animal Welfare Act**
( ) **State of California Fish and Game Commission** (Title 14) - Scientific Collecting Permit(s)
( ) **Endangered Species Act**
( ) **Fishery Conservation and Management Act**
( ) **Lacey Act**
( ) **Marine Mammal Protection Act**
( ) **Convention on International Trade in Endangered Species of Wild Fauna and Flora**
( ) **Other: please list** _____

_____
Signature, Responsible Faculty Member Date

Review by the IACUC Attending Veterinarian (if necessary):

_____
Signature, HSU Veterinarian Date ( ) Approved ( ) Denied
Explanation of denial:

Final Committee Decision. All protocols must be approved prior to the start of research.

_____
Signature, IACUC Chair Date ( ) Approved ( ) Denied
Explanation of denial: