

Institutional Animal Care and Use Committee

Minutes for April 8, 2022

Call to Order

The Institutional Animal Care and Use Committee (IACUC) of Texas A&M University-Corpus Christi met on April 8, 2022, via Zoom. Quorum was confirmed and the meeting was called to order at 1:03 pm with the following members present.

Total Number of Members Present in Voting Capacity: 9

required for quorum: 6

Meeting Attendance

Meeting Chair:

<u>Chair name</u>	<u>Voting Status</u>	<u>Membership</u>	<u>Affiliation</u>	<u>Scientific</u>	<u>Arrive late</u>	<u>Left Early</u>	<u>Teleconference</u>
Felix Omoruyi	Voting	Full	Affiliated	Scientific	N/A	N/A	Zoom

Members Present:

<u>Member name</u>	<u>Voting Status</u>	<u>Membership</u>	<u>Affiliation</u>	<u>Scientific</u>	<u>Arrive late</u>	<u>Left Early</u>	<u>Teleconference</u>
Kesley Banks	Voting	Full	Affiliated	Scientific	N/A	N/A	Zoom
Eric Christensen	Voting	Full	Affiliated	Non-Scientific	N/A	N/A	Zoom
Michael Garcia	Voting	Full	Affiliated	Scientific	N/A	N/A	Zoom
Shawn McCracken	Voting	Full	Affiliated	Scientific	N/A	N/A	Zoom
Jean Sparks	Voting	Full	Affiliated	Scientific	N/A	N/A	Zoom
Shayna Whitaker	Voting	Full/Vet	Affiliated	Scientific	N/A	N/A	Zoom
Daniel Coffey	Voting	Alternate, Orbach	Affiliated	Scientific	N/A	N/A	Zoom
John Scarpa	Voting	Alternate, Seemann	Affiliated	Scientific	N/A	N/A	Zoom
Larry Lloyd	Voting (upon Banks departure only)	Alternate, Banks	Affiliated	Scientific	N/A	N/A	Zoom
Angelica Chapa	Non-Voting	Alternate, Sparks/ Omoruyi	Affiliated	Scientific	N/A	N/A	Zoom

Staff and Guest Present:

<u>Name</u>	<u>Job Title</u>	<u>Teleconference</u>
John Scarpa	IACUC/IBC Coordinator	Zoom
Rebecca Ballard	Director, Research Compliance	Zoom

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I. Conflict of Interest

Members are reminded of their obligation to disclose any conflict of interest related to any of the items on today's agenda. The chair called for any disclosures of conflict of interest. Conflicts were declared and are noted in the minutes on relevant items.

II. Minutes

Minutes from March 11, 2022 were reviewed. The Chair invited additional comments, questions, and/or concerns. Having none, the motion to approve was made, seconded, and carried.

Vote yes:	8	Recused:	0
Vote no:	0	Excused:	1 (Garcia)
Abstain:	0		

III. New business

The Committee reviewed new business items.

A. Education:

1) IACUC Core Training offered by PRIM&R. Webinars in June (22-30) for 1) IACUC Fundamentals and 2) Essentials of IACUC Administration (\$250-\$349/course). If interested, contact IACUC Coordinator. More details at: <https://www.pathlms.com/primr/courses/40391>

2) Material now online for Virtual Workshop: Institute for Laboratory Animal Research of the National Academies of Science, Engineering, and Medicine - Animal Welfare Challenges in Research and Education on Wildlife, Non-Model Species, & Biodiversity; 9 & 10 Feb 2022. Access – see file in MS Teams (Feb 18 or April 8 meeting) for NASEM pdf or <https://www.nationalacademies.org/event/02-09-2022/animal-welfare-challenges-in-research-and-education-on-wildlife-non-model-animal-species-and-biodiversity>

3) Publication - Preparing for a Semiannual IACUC Inspection of a Satellite Zebrafish Facility (JAALAS, 2009).

4) An IACUC Member's Guide to Animal Facility Inspections, website with free video (pdf with links).

IACUC coordinator alerted members to educational opportunities and interesting articles.

B. Other:

1) Semi-Annual Inspection: A minimum of two members and the veterinarian must conduct an inspection. On-campus and off-campus sites will all be done in one day. Polling in March indicated the availability of members and veterinarians allowed for inspection to be conducted on Wednesday, May 4, 2022. Reminder - Any member may attend an inspection. If you wish to be part of inspection, please contact (phone or email) IACUC Coordinator to be included in notices.

2) Protocol Assignment Rotation: Chair

Discussion: Burden on the Chair is high to be both DMR reviewer and reviewer of stipulations. The designated member assignment chart was reviewed to evaluate removal of Chair. Members supported removal of Chair from rotation.

The Chair invited additional comments, questions, and/or concerns. Having none, the motion to approve was made, seconded, and carried.

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Vote yes:	7	Recused:	0
Vote no:	0	Excused:	2 (Garcia and McCracken)
Abstain:	0		

IV. New Studies

None.

V. Amendments

None.

VI. Continuing Review

IACUC #: 2021-05-012 (rec #48)
Protocol title: Honor's and Graduate summer course: field experience in dolphin research
Principal Investigator: D. Orbach
Primary Reviewer: J. Scarpa and M. Garcia (MG replaced NG)
Conflict of Interest: D. Orbach
Species: Bottlenose dolphin (*Tursiops truncatus*)

Protocol Summary: The goal of the course is to teach honors students about field techniques to research dolphins in their natural habitats. Students will learn how to:
- non-invasively observe dolphins from shore using a theodolite and binoculars
- passively record dolphin acoustics using a hydrophone deployed from a small research vessel
- learn how to safely approach dolphins from a moving vessel and capture their photographs on camera and video
CR update: 8 honors students were trained in a variety of field techniques during Summer 1 of 2021 and no dolphins were harmed in any way. Students reported positive learning experiences.
Adverse Events reported? No
Alternatives to Animal Use? No
Alternatives to Potentially Painful Procedures? No
Not Unnecessarily Duplicative? Yes
Enrollment Status: CITI Training: verified OHP Enrollment: verified

Discussion: Observational study in the field using drones for non-invasive observation of dolphins. Permits are in place as use hydrophones near dolphin pods. OHP and training verified. Last amendment added graduate level class. Students reported positive learning experience. No issues seen for approval.

The Chair invited additional comments, questions, and/or concerns. Having none, the motion to approve with a review period of one year was made, seconded, and carried.

Vote yes:	8	Recused:	0
Vote no:	0	Excused:	1 (Sparks)
Abstain:	0		

IACUC #: 2021-05-013 (rec #49) **Closed as "No IACUC Needed Determination"**
Protocol title: Land-based surveying of bottlenose dolphins
Principal Investigator: D. Orbach
Primary Reviewer: J. Scarpa and M. Garcia (MG replaced NG)
Conflict of Interest: Orbach
Species: Bottlenose dolphin (*Tursiops truncatus*)

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Protocol Summary: Monitor movement patterns of dolphins in busy ship channels during interactions with boats.

CR update: A total of 2,670 dolphins (2,750 adults, 100 calves) were observed across 34 collection days (Site 1: 25 days, Site 2: 9 days). Dolphins were observed bow-riding on most large oil tankers and bulk cargo carriers that traveled through CCSC in addition to several tugboats, barges, and offshore supply boats. Dolphins were also observed traveling toward tankers and joining bow-riding group during several field sessions. Dolphin ecotourism boats were observed following dolphin groups closely throughout the Summer months. In the morning and early afternoon, dolphins were observed in the Lydia Anne Channel and the areas of convergence. In the late afternoon, dolphins were observed foraging close to the Port Aransas ferry landing.

Adverse Events reported? No

Alternatives to Animal Use? No

Alternatives to Potentially Painful Procedures? No

Not Unnecessarily Duplicative? Yes

Enrollment Status: CITI Training: verified

OHP Enrollment: verified

Discussion: Original protocol submission was approved but when reviewed again under CR determined this is really a wildlife observational study. The submission is before the board because of timing and the determination was still pending. Since this submission has been determined that it would fall under observational wildlife study, IACUC oversight is no longer required. The board reviewed the scope of the project and confirmed the project is observational wildlife study.

The Chair invited additional comments, questions, and/or concerns. Having none, the motion to find the scope of the project fits within an observational study not requiring IACUC oversight and to close the current protocol was made, seconded, and carried.

Vote yes: 9
Vote no: 0
Abstain: 0

Recused: 0
Excused: 0

IACUC #: 2020-04-001 (rec #23)

Protocol title: Tagging Methods for Marine Fishes

Principal Investigator: G. Stunz

Primary Reviewer: F. Seemann and L. Lloyd

Conflict of Interest: K. Banks & D. Coffey

Species: fish (multiple species)

Protocol Summary: The overall goal of this project is to provide new information on movement, stock structure, and discard mortality of various marine fishes captured in the Gulf recreational hook-and-line fishery using advanced tagging technologies. The specific aims of the project(s) are to:

- 1) Examine seasonal movement patterns of Cobia and evaluate the degree of mixing between sub-regions in the Gulf of Mexico
- 2) Estimate discard mortality for Cobia captured in the U.S. recreational hook-and-line fishery
- 3) Define spatial and temporal patterns of habitat use for tarpon along the Texas coast
- 4) Characterize large-scale movements of tarpon to assess connectivity of the Texas population with adjacent regions of the Gulf of Mexico (Florida, Mexico)

CR update: Fifteen additional Cobia were tagged with acoustic tags (n=7) or double-tagged with both acoustic and pop-up satellite archival transmitting (PSAT) tags (n=8) off the coast of Texas. This completed tagging for Year 2 by October 2021. PSATs were programmed to release from fish between late fall 2021 and early spring 2022 to aid in the identification of overwintering areas and any potential connectivity with Mexican waters. Three of the PSAT tags failed to report, which could result from tag malfunction, damage, and/or biofouling; though all tags were

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coated with antifouling paint. All other double-tagged fish have successfully reported. In October 2021, a PSAT-tagged Cobia was reported recaptured, and the anglers released the fish. Underwater passive acoustic receivers monitoring for acoustic tags will be downloaded during summer 2022 to provide additional movement data. Data from deployed acoustic (n=15) and PSAT (n=1) tags are still being collected on Cobia.

In addition, twelve Shortfin Mako sharks were tagged with satellite tags in the last reporting period. All Makos have remained resident in the Gulf of Mexico during their tracking period. Ten tags have ceased reporting now, which could result from tag malfunction, damage, biofouling (all tags were coated with antifouling paint), and/or sharks spending less time at the surface (i.e., these satellite tag models need to be at the surface to transmit position data). Two sharks continue to report after almost a year since deployment, and both are in the western Gulf of Mexico. Shark species caught as by-catch were tagged using passive dart tags and released immediately, and include hammerhead sharks (*Sphyrnidae* sp.; n=4) and carcharhinid sharks (*Carcharhinidae* sp.; n=3).

Adverse Events reported? No

Alternatives to Animal Use? No

Alternatives to Potentially Painful Procedures? No

Not Unnecessarily Duplicative? Yes

Enrollment Status: CITI Training: verified

OHP Enrollment: verified

Open meeting: K. Banks & D. Coffey present at 2:10 pm.

Discussion: Species approved on permit indicates “other”. All species listed on the excel sheet that were sampled are covered on permits. *Seriola dumerili* (Great Amberjack) was not listed on the permit (post meeting check indicated it is on permit). Addition of Great Amberjack to protocol was approved by amendment (rec# 78) but have not tagged this species, yet.

Closed meeting: K. Banks & D. Coffey exits at 2:13 pm.

Discussion: Some species are specified in detail in the protocol. Species (like red drum) have been added on through amendments but these lack justification for use in the protocol. No citation on how they arrived at standard practice described.

Red drum, spotted seatrout, and black drum have been added as species due to increased funding of the project. Passive dart tagging, acoustic tagging and satellite tagging techniques are used for a maximum of 30 animals per species.

Literature or preliminary data should be used to justify the number of sharks or fish tagged, as 30 are indicated in the lay summary but more are requested for the added species. The sentence “Shark species need to be added to this protocol for tagging studies.” Should be omitted.

Additional funding section: Does not give justification for numbers per year.

Page 59 – list Dr. Stunz but blank personnel page.

CITI and OHP verified for all personnel.

Page 64 – summary of findings matches the submitted excel sheet and method applied upon collection.

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Page 63 – The summary is from the original protocol, which after amendments does not match the number of species being examined. Next review or amendment should look at amending total protocol so that it always matches. Possibly submit a method protocol that is applied to different projects.

Chair reminded committee members that the original protocol was approved and all amendments thereafter. Therefore, we need to be judicious during continuing review of what changes or stipulations are recommended as the protocol and amendments were approved. Continuing review focuses on previous year report using the protocol as a guide. Large discrepancies should be noted and changes requested but if methods have not changed since approval, we need to be careful in asking for protocol changes that are minor.

Reviewer noted that the submitted animal use table and knowledge of approved amendments alleviates concerns made above about protocol language not matching. No other concerns or changes were expressed.

The Chair invited additional comments, questions, and/or concerns. Having none, the motion to approve with a review period of one year was made, seconded, and carried.

Vote yes:	8	Recused:	2 (Coffey & Banks; Lloyd voting for Banks)
Vote no:	0	Excused:	0
Abstain:	0		

IACUC #: 23-19 (rec #21)

Protocol title: Aquaponics

Principal Investigator: F. Seemann

Primary Reviewer: S. McCracken and C. Sassine

Conflict of Interest: Seemann

Species: fish (Medaka, *Oryzias* sp.)

Protocol Summary: This Aquaponics system is a freshwater structure that houses fish in a tank, filtering the water through roots from a bed of floating plants to result in edible produce. The produce can be used for Izzy's Food Pantry or other Green Team projects. The system is used to attract students to participation in the Green Team and helps to educate students with its unique structure on sustainable practices.

CR update: The aquaponics system next to the islander garden has been largely successful. The medaka fish are faring well with winter and summer temperatures. Increased algae growth has been noted and will be amended through the introduction of nerite snails as requested in the latest amendment.

Adverse Events reported? No (Note - Reportable Event below submitted after CR submitted)

Alternatives to Animal Use? No

Alternatives to Potentially Painful Procedures? No

Not Unnecessarily Duplicative? Yes

Enrollment Status: CITI Training: verified

OHP Enrollment: verified

Discussion: Reviewer questioned the water quality check in the system. This could relate to the higher mortality rate. Algae growth could reduce oxygen available. Water quality was not listed as a reason for the higher mortality seen. Protocol was reviewed for the water parameters being checked. Levels are checked and an electronic database is checked. Logs were provided as part of the reportable event form. Do we need to worry about snails escaping and any impact on environment? Snails were approved on an amendment (#77).

The Chair invited additional comments, questions, and/or concerns. Having none, the motion to approve with stipulations with a review period of one year was made, seconded, and carried.

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Stipulations include: If personnel are working, please discontinue their work on the animal protocol until a personnel change is submitted and approved.

Vote yes:	9	Recused:	0
Vote no:	0	Excused:	0
Abstain:	0		

VII. Reportable Events

IACUC #: 2021-03-007 (rec #10)
Protocol title: Hybrid Headwater Fishes
Principal Investigator: D. Portnoy
Primary Reviewer: J. Sparks and C. Gonzales
Conflict of Interest: N/A
Species: fish (*Gambusia nobilis*)
RE Name: Animal Use Number Exceeded
RE Type: Protocol Deviation/Violation
RE Description: It was expected that we would collect tissues from up to 40 individual *Gambusia nobilis* at four sampling sites (n=160). However, the species was encountered by collaborators at TPWD at two additional sites, and tissues were collected, resulting in an increase (61 above) in reported animal use numbers (total 221).
Managed: No immediate action taken. In field work, unexpected events may occur that require field-based decisions. Finding the targeted animals at other sampling locations was unexpected. Therefore, collaborators took samples as needed as they could not return to process an amendment and return to sample again; fish were already caught and did not want to waste (refine). Excess numbers were reported at annual update.
Corrective actions: Reportable events will be submitted as they occur instead of waiting until annual report. Field-based sampling will either be noted that animals may occur at other unexpected sites or will include numbers at other sites, even though not expected.

Deviation Time-Line follows:

Date event occurred: 08-18-2021

Date PI aware: 08-18-2021

Days between event and PI awareness: 0

Date Report Submitted: 03-22-2022

Days between PI awareness and report submitted: 216

Discussion: Oversampled at a site for this field study. Sampled 61 more (38% higher) than noted in protocol. Sampling was done by TPWD and PI received samples. Member commented that at last meeting there was a discussion for field studies that a number of a proportion above animal usage number be set so as not to trigger reportable event. This may be too subjective and no changes should be made. The issue for this event is not only the number, but the delay in reporting until the annual report, which was about seven months. Corrective action is to report as it occurs versus waiting until annual report due.

The Chair invited additional comments, questions, and/or concerns. Having none, the motion to approve the reportable event and corrective action plan provided was made, seconded, and carried.

Vote yes:	9	Recused:	0
Vote no:	0	Excused:	0
Abstain:	0		

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IACUC #: 23-19 (rec #11)
Protocol title: Aquaponics
Principal Investigator: F. Seemann
Primary Reviewer: K. Banks and A. Chapa
Conflict of Interest: F. Seemann
Species: fish (Medaka, *Oryzias* sp.)
RE Name: Unnoticed mortality
RE Type: Adverse Event – Initial Report
RE Description: During the annual count of medaka fish present in the system to adjust the actual fish numbers, we discovered a 90% loss of individuals. The expected fish number was 5058, but only 573 were actually present in the system. Re-visiting the aquaponics logs, no visible mass mortality occurred. Link to the record sheet: https://docs.google.com/spreadsheets/d/1nNfMZWYOzBK1CxOzj-5b0Qe4epC0HZRd8c_kAwMLw88/edit?usp=drivesdk
Managed: No immediate action was taken as the remaining fish fared well in the system.
Corrective actions: There are multiple reasons, which may have led to this increased mortality:
1) the insulation, which was added before the freezing event in 2021 showed signs of weathering and may not have been as effective during this years' freeze.
2) the pump was running during the freeze event and may have resulted in colder water temperatures
3) in general the pump shows signs of wear and tear, which affects water circulation (but not water quality)

Deviation Time-Line follows:

Date event occurred: 03-22-2022

Date PI aware: 03-22-2022

Days between event and PI awareness: 0

Date Report Submitted: 03-25-2022

Days between PI awareness and report submitted: 3

Discussion: Looks like it was a little less than a month from doing a total count of fish and noticed mortality. In the logs provided, they are doing water quality checks. The week before they had daily counts. It looks like in this period the frequency of counts decreased. Member commented that numbers may be expected and not actual. See numbers of fish going up as if when added. Logs were reviewed; showed a question mark with a notation of less fish. The reduction in fish was noted, but did not seem to indicate a full count. Counting schedule should be increased from once annually moving forward. One log entry (21 Feb 2021) noted some fish look half dead but no response to this notation is indicated. In commercial culture you will sample periodically to get an accurate count versus an assumption based on running numbers of fish added. Dec 19 – 20 lost two fish but no deaths recorded. On November 15 there is a notation of two deaths in blue tank but loss of two fish did not get subtracted out till December. Record keeping is inconsistent. PI notes mortality event may be related to the pump, but pipe insulation was also noted. Wear and tear on the system from exposure to elements was noted. Environmental Committee had reviewed and approved requested maintenance (fence repair and addition of shade material above), which was completed. Ongoing there needs to be more attention to maintenance of system and system components from project personnel.

The Chair invited additional comments, questions, and/or concerns. Having none, the motion to approve with stipulations to corrective action plan was made, seconded, and carried. Timeline to respond to corrective action by next IACUC meeting.

Stipulations for Corrective Action Plan include:

1. Adherence to the counting schedule moving forward. Please provide rate of counting frequency.
2. Please provide counting procedure: Is this based on estimates or actual counting from sample or complete count?

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3. Notations such as “fish are half dead” should also include a response to these adverse observations. This may include reporting to IACUC.
4. Being mindful of death recording (e.g., see Dec 19 - 20 lost of two fish but no deaths recorded in death column). Deaths noted in comments need to be accounted for in the logs.
5. Consistency in reporting loss in timely manner (i.e., not a month later in log)
6. PI retrain staff on accurate and consistent entry in animal care logs. Please document the completion of lab staff training in research record training file. Training to be required with current personnel to reduce repeat instance of log issues noted. Training to be done annually within lab staff.
7. Initials of who is doing recording in logs was done initially but falls off after June. Please review and verify logs are completely filled out, including adding staff initials of who is performing the task.

Vote yes:	9	Recused:	0
Vote no:	0	Excused:	0
Abstain:	0		

VIII. Other

The next meeting is scheduled for Friday, May 20, 2022, from 10:00 am to Noon (note earlier) via Zoom.

Discussion: Why is meeting same day as IBC meeting? Can it not be on 13 May? There was no obvious reason seen on calendar for why IACUC meeting was scheduled same day as IBC meeting on the 20th. Motion was made to change next IACUC meeting to May 13, 2022, from 1-3 pm.

The Chair invited additional comments, questions, and/or concerns. Having none, the motion to approve the IACUC Meeting day and time change was made, seconded, and carried.

Vote yes:	6	Recused:	0
Vote no:	0	Excused:	4 (Sparks, Christensen, Coffey, and Banks; Lloyd voting for Banks)
Abstain:	0		

Meeting was adjourned at 2:33 pm.