



INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE

Dr. Shanna Ivey, Chair

MSC 3RES
New Mexico State University
P. O. Box 30001
Las Cruces, NM 88003-8001
Phone: 575-646-7177 Fax: 575-646-2480
E-mail: ovpr@nmsu.edu

IACUC Members:

Dr. Shanna Ivey, Chair
Animal & Range Sciences
222 Knox Hall
(575) 646-4650
sivey@nmsu.edu

Dr. Clint Loest
Animal & Range Sciences

Dr. Timothy Wright
Biology

Dr. Colleen Caldwell
Fishery & Wildlife Sciences

Mr. W. Scott Eschenbrenner
Special Assistant to the President

Mr. Trey Miller
Community Member

Dr. Erin Ivey Weich
University Veterinarian

Dr. JoAnne Dupre, Ex-Officio
Research Integrity & Compliance

Office of the Vice President for Research
Anderson Hall, Room E2010
(575) 646-7177

Dr. Luis A. Vazquez
Interim Vice President for Research

IACUC SEMI-ANNUAL MEETING

APRIL 7, 2017

ANDERSON HALL LARGE CONFERENCE ROOM

8:30 AM – 10:00 AM

MINUTES

Members Present: Shanna Ivey, Clint Loest, Colleen Caldwell, Scott Eschenbrenner, Trey Miller, Erin Weich

Members Not Present: Tim Wright

Invitee(s) Present: JoAnne Dupre (ex-officio), Luis Vazquez (ex-officio), Sue Bonar, Michelle Gavin

Meeting was called to order by the Chair at 8:33 a.m.

1. Sign-In Sheet was distributed. A quorum of members was present.
2. Approval of Minutes
The minutes of November 10, 2016 were distributed and reviewed. No corrections were identified. The motion was made and seconded to accept the minutes as presented. Vote: In favor (6), opposed (0), abstain (0). The minutes were accepted with no modifications.
3. Protocol Reviews and Process
Discussion was held on whether the review sheets needed to be revised. Now that we have used the revised forms for a while we are asking if the review checklist matches the forms. A comment was made about one of the checklist items, under the section with anesthesia, breeding, etc, the category for animals experiencing pain is unclear;

should this match the pain category, or is other description needed? Chair will look at it. Another comment was that after one or more categories are checked, the description in the next section should specifically refer to it. There should be a way on the form to identify where the detail about the checked categories is given.

4. Facility Inspections

Members described each facility they inspected and gave original copies of the signed inspection forms to the chair.

- Fish facility. No deficiencies. Recommendation for work order to replace old ceiling tiles.
- Animal care facility. Recommendation for a few mechanical items, to replace some ceiling tiles and to start the fans. Manager reported that everything is working. Feed storage was okay. One refrigerator contained a bag of expired feed that was well marked as not to be used, and this was removed and thrown away. One member commented that he is very pleased with the transformation in this facility over the past four years. The recommendations from the committee and the responsiveness of the manager have improved the facility.

Members discussed the new procedures with budgie surgery. The veterinarian has been involved with training and consulting for the anesthesia and survivability after surgery.

The surgery room is equipped with a biosafety cabinet although the room itself is not completely aseptic. The researchers are supposed to wear gloves gown and also to autoclave tools before surgery.

- Animal metabolism

Comments were made about the protocol and procedure book. The book contained older procedures as well as new procedures, so was difficult to determine which were currently being used. Recommendation to remove the older procedures, and to update each procedure by marking with the current IACUC protocol number or "emergency procedure" as appropriate. The CITI and personnel training records need to be updated as well as the whole binder needs to be organized better.

The metabolism room was in excellent shape. Several lightbulbs need to be replaced.

The surgery room needs to be better organized to remove clutter. The area around the sink and paper towels should look cleaner. The floors should be cleaner. The cabinet by the sink needs to be remounted. The top brackets are loose, away from the wall. The large red unused table needs removed because it attracts clutter, like old ropes and boards. Recommend remove older cabinets, put in new shelves.

Holding room looked good, except for a few pellets on the floor. Recommend sweep after each use. GFI outlet has not been installed even though work order is in. Recommend instead to raise outlets up five feet from the floor, above the height of cattle.

The metabolism rooms look good. No animals were present.

- Horse Farm

Basically everything was great. Protocol was present but training records were not. Animals look good. Making improvements with pens in the back. Hay bales are under tarps; not in the hay barn because they've had problems with that being burned in the past. Discussion was held on improving the fencing.

Discussion was held on training records. Recommendation was made for the IACUC chair to coordinate with the biosafety manager to attach training records to the protocols so that they can be given to the PI with the approved protocol. It seems to be a repeating occurrence that the PIs are having a hard time getting the training records. This way the committee inspectors would be able to see the list of personnel on the protocol and have the training records attached right there. We usually query the database. We could instead request that the researchers attach the training records and submit with the protocol.

Incidents noted in last year: death of two foals. Manager documents and calls vet and IACUC Chair.

Watering fixture issue resolved; pastures improved to raise alfalfa.

- Biology Annex

Fish room was clean. Training records were there. Noted that PI needed a protocol to use fish in teaching. Aviary renovations are in progress. Birds will be returned when weather improves. Training records were not here; they are at the other location. Recommend duplicate copies be kept here when this protocol is active. Another recommendation is for the animal care manager to be present since he is the one that feeds the birds. He should be at the inspection to be able to answer questions from the committee members, and to hear the findings and recommendations.

During the previous inspection it was noted that there was old frog food in the freezer that was not labeled. The food was still there and it was still not labeled. There are no frogs in the facility and so the food should be removed. Also an open bag of parakeet food should be tossed out because there are no budgies there currently. The chair noted that the facility reports had not been sent to the facility managers. This will be corrected so that managers need get the feedback.

- Biology department

Training records are missing from three areas. The inspections are announced in advance with instructions that training records must be present.

No animals were present in the Hansen lab. In the teaching lab some of the fish flakes needed to be labeled. Recommend that the PI keep the food through the summer since the fish are present, then toss it and get new food that will last through the following year and label it with the dates for use.

Six mice were present in the Xu lab, and everything was in order.

The squid room also was in order.

- Jornada

Three members went to the Jornada site on 4/4/2017. Rick was not present. We looked at the animals present and the medicine room and everything looked ok. We did find a downer cow. She was in lateral recumbency. Supposedly the vet had come out and seen it the week before. She was more than 10% dehydrated. Her tail was completely covered in dried diarrhea. She couldn't raise her head. The cow needed to be put down. It was a bad finding. We talked to some workers there. They didn't know if or when the vet had seen her. There were signs of treatment and fluids on the table of the medicine room, but no records. But it was obvious that the cow needed to be put down. Messages were sent to the PI, and he provided the vet log and timeline. Cows were brought in and treated with deworming, vitamins and good feed. Two of the cows recovered but the third did not. The vet came and administered IV. More meds were administered over the next few days. The vet did not return, but told the staff to continue what they were doing. The stockman should have euthanized because the administration of fluids was not enough. They were following the vet's directions, but the cow wasn't getting up, she wasn't responding to the fluids, she wasn't eating.

Part of the problem is that the APHIS group has said that gunshot death is not appropriate, even though AVMA has and we have an approved SOP for this. The vet was not returning calls at this time. Captive bolt is in the same category as gunshot, unacceptable per APHIS. These animals are owned by the Animal and Range Science department, so the IACUC Chair gave written permission to use the approved SOP for the extension range program. The cow was euthanized. That is the purpose of the emergency euthanasia SOP for range animals in outlying stations, rather than to transport the animal and prolong suffering when the vet is not available. Situations that might require this are a broken leg, predator attack, or conditions that might be dangerous for a person in close contact. A summary statement will be written for the NMSU's IO, and for Jornada. The range supervisors must be able to contact a vet who is available and responsive. This is sometimes difficult to find in this region. They could have called the IACUC vet or the department so that the decision could have been made sooner.

The chair will meet with the supervisor to complete the documentation.

- Livestock entomology

Everything looked great at the facility. Safety training records need to be updated for the new people. Older records of people who are no longer actively working there need to be cleaned out. Recommendation was made to improve the feed storage area to keep rabbits out. The new supervisor is very willing to do this work. Water was clean, area was clean; everything was very well kept.

5. Animal Care Program Review (OLAW Checklist)

The OLAW Checklist was distributed and reviewed by members. The Chair asked the members to comment on any aspects of the animal care and use program. The signature page verifies the committee review.

6. IACUC Certification for Animal Workers, and Occupational Health and Safety Program for Animal Workers

Update on animal worker safety training: training classes are held every month. Online training modules through CITI are available; recommended for experienced personnel as a refresher training. CITI modules that are used are Animal Biosafety, and the wildlife or cattle or other animal coursework as appropriate to the species in use. Occupational health forms are given to all who attend class or take an online training, for tetanus vaccination and other services or updates as needed.

The recommendation is to use the CITI module, "Animal Biosafety" as a refresher, and to update the webpage with instructions for the occupational health program. The website needs to be a lot clearer about what's expected for the forms. Researchers and students can be reminded to contact the biosafety manager for help obtaining their certificates of training.

7. Compliance Status (USDA, OLAW)

- a. The annual report to OLAW was sent in January, and was approved with the change in the Institutional Official (IO) to the interim Vice President for Research, Dr. Luis Vazquez, and the addition of Mr. Trey Miller as the community member.
- b. The USDA facility notice of report due was not received. Follow-up is needed.
- c. Assurance to OLAW is current and approved until 2020.
- d. The USDA-APHIS annual report was submitted, reporting 0 covered animals.

8. Semi-Annual Report to the Institutional Official (IO)

The semi-annual report, required by the PHS Policy on Humane Care and Use of Laboratory Animals and the USDA Animal Welfare regulations certifies to the Institutional Official that the committee met today April 7, 2017, and conducted the evaluation of the animal care program, and conducted the inspections of the animal facilities. As part of the cooperative agreement with Jornada, a similar semi-annual report was prepared for the Responsible Official of that facility to certify the inspections and specifics of that program. The reports were approved by the Committee members and will be sent to the respective Institutional Officials.

9. Additional Items for Committee Considerations

- One member, Dr. Wright, will be on sabbatical for summer and fall. The committee can maintain a quorum for official business in his absence. Dr. Wright can continue to participate by distance methods but will not be here for the fall facility inspections.

- Protocols to date

Ten protocols have been submitted to date. The tenth protocol has training requirements that need to be completed. One pending wildlife protocol has procedure items that need to be addressed. Another submitted with horses has not been sent to IACUC members yet. The number of protocols is less than this time last year. A typo was noted in the year at the top of the page; this should be 2017, not 2016.

- IACUCs are being asked to look more closely at the science in protocols. Analysis of published datasets, often in biomedical research, has shown that many studies are not reproducible due to poor experimental design. The animal use methods are fine, but if the study is not publishable then IACUCs should question whether the work using animals should be done. OLAW has brought up this issue at recent meetings as an expectation of the IACUC review. The Chair noted that the member's comments do carry weight with the PIs. Faculty researchers are willing to address issues identified by committee members as a group rather than a comment from an individual.
- No institutional policies define specifically the documentation that PIs must maintain for their research. IACUC Chair would like to work with the office of grants and contracts to bring awareness to researchers about the value of good practices since there can be serious consequences when this is overlooked. The IACUC Chair will send a summary of the findings of facility reports, with the recommendations for corrective actions. Good practices in documentation, such as self-assessment checklists and training records, will make it easier for IACUC inspectors to find the information they need. More importantly, it will benefit researchers in their care of the animals. The Chair thank the committee members for their comments and participation.

The spring meeting of the IACUC adjourned at 9:58 a.m.

Meeting minutes submitted by: J. Dupre

Minutes accepted and approved by:


 Dr. Shanna Ivey, Chair

cc: Dr. Luis A. Vazquez, Interim Vice President for Research

INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE
Dr. Shanna Ivey, Chair

MSC 3RES
New Mexico State University
P. O. Box 30001
Las Cruces, NM 88003-8001
Phone: 575-646-7177 Fax: 575-646-2480
E-mail: ovpr@nmsu.edu

IACUC Members:

Dr. Shanna Ivey, Chair
Animal & Range Sciences
222 Knox Hall
(575) 646-4650
sivey@nmsu.edu

Dr. Clint Loest
Animal & Range Sciences

Dr. Timothy Wright
Biology

Dr. Colleen Caldwell
Fishery & Wildlife Sciences

Mr. W. Scott Eschenbrenner
Special Assistant to the President

Mr. Trey Miller
Community Member

Dr. Erin Ivey Weich
University Veterinarian

Dr. JoAnne Dupre, Ex-Officio
Research Integrity & Ethics

Dr. Luis A. Vazquez, Ex-Officio
Interim Vice President for Research
Office of the Vice President for Research
Anderson Hall, Room E2010
(575) 646-7177

IACUC SEMI-ANNUAL MEETING
MINUTES
NOVEMBER 2, 2017
ANDERSON HALL LARGE CONFERENCE ROOM

Members Present: Shanna Ivey, Clint Loest, Colleen Caldwell, Trey Miller, Erin Weich, Scott Eschenbrenner (call-in), Tim Wright (call-in)

Members Not Present: none

Invitee(s) Present: Luis Vazquez (ex-officio), JoAnne Dupre (ex-officio), Sue Bonar, Michelle Gavin, and Stephanie Caballero

Meeting was called to order by the Chair at 3:30 p.m.

1. Sign-In Sheet was distributed. A quorum of members was present. Dr. Wright and Mr. Eschenbrenner joined the meeting via Zoom app.
2. Approval of Minutes
The minutes of April 7, 2017 were distributed and reviewed. No corrections or additions were identified. A motion was made and seconded to accept the minutes as presented. Vote: In favor (7), opposed (0), abstain (0). The minutes were accepted with no modifications.
3. Animal Care Program Review (OLAW Checklist)
The OLAW Checklist was distributed and reviewed. The Chair asked for comments on any aspects of the animal care and use program. The signature page verifies the committee review.

4. Facility Inspections

Facility inspections were conducted on October 31, November 1 and 2, 2017. Members described the results of the site visits and gave original copies of the signed inspection forms to the Chair.

- Jornada – IACUC members toured the facility, and found everything well-ordered and clean. USDA-APHIS conducted a surprise inspection a month ago, with a result of no findings. The facility has changed veterinarians and SOPs to provide more timely response to animal needs. *Criollo* cattle were present in pens, and all were well-watered, and clean, and feed was available. The committee noted a deviation in the recording of daily logs for the cannulated cattle; instead of being entered in the electronic drive, personnel had entered data by hand in the logbook during the time that the principal investigator was away from the facility. The SOP will be updated to specify how log data will be recorded when primary personnel are on vacation. Inspectors noted that some stored medications, i.e., lidocaine and vaccines, were nearing expiration dates; arrangements were made with the Animal Science department to trade for new supplies so that the older stocks can be used up before expiration.
- Biology Annex – electric fish room was clean and organized. The researcher reports that the new water system and alarm notifications are working well. The roof is overdue for replacement. Work orders have been submitted for patching and repairs. In the open area of the Annex, a small chest freezer used to store animal feed had a bag of expired frog food. It was unclear who owned it since there are no frogs at the facility, and the animal care manager was instructed to discard it if the freezer is used to store other animal feed bags. The outdoor aviary received a notation of minor deficiency due to the lack of cleanliness in the cage area. The floor of the walk-in cage does not have adequate drainage so cleaning must be done manually by sweeping and scraping. The PI was instructed to contact Facilities and Services (FS) within two weeks to develop a plan for corrective action. A final solution will take some time, for FS to prepare a quote and then to make arrangements for funding.
- Biology department – No negative findings in the rooms with vertebrates (mice, chicks, fish). The inspection team noted that ketamine used by the mouse researcher is kept in a locked office; the PI works well with the vet and keeps a log of use. In the squid room, the floor covering is flaking and it was recommended that it be recoated with paint to avoid clogs in the drains. Also, the temperature of the baby squid room is not stable. Although there are no squid in the room currently, the Chair will investigate further to find out if the temperature will have an adverse effect on upcoming projects.
- Animal care facility – Protocols, procedures, logs were available. The logbooks for the animal care staff duties are located in one room, not in the individual rooms, so IACUC inspectors will know where to find them. Certificates of IACUC training and animal worker safety were up-to-date. Fans were not on, and it appeared that no follow-up had occurred after the last inspection. IACUC members recommend setting a timeline for corrective actions. The facility was not as clean as previous visits. In the budgie room, there was water on the floor and an accumulation of feed and feces in the floor drain. The animal care staff noted that they had just swept and hosed the floor; it is obvious that the

floor drain is not adequate, and the staff was counseled on ways to alter the cleaning procedure. The room was humid, with strong odor. Duct tape around the vent needs to be removed. Cleanliness in the maintenance/storage room was also unsatisfactory. While the room had just been hosed out, there was a stack of dirty bird boxes that no one took responsibility for. The Chair noted that prior to the inspection, the PI had sent a message to the IACUC noting a history of poor communication between the lab staff and the animal facility staff concerning the cleaning. The Chair followed up with Facilities about the work orders for the fans; that work order now has been submitted. The building heat was turned on today in response to a prior work order. The IACUC letter to the Institutional Official will document the cleanliness as a minor deficiency and note a timeline of two weeks for correction and re-inspection. In the few days since the inspection, the animal care manager has sent photos to show that cleaning has been done and other corrective actions will be addressed. The Chair will work with the VPR and Compliance office to develop a management plan for improving communication and oversight.

- Animal metabolism and physiology – protocols, standard operating procedures, and daily logs were present. Certificates of IACUC certification and training were up-to-date. In the surgery and recovery rooms, three lights need to be replaced. No animals were present. No animals were present in the holding rooms. Recommendation was made again to contact FS to relocate an electrical outlet so that it is higher up on the wall, possibly by running conduit from the top down. The metabolism rooms were clean; no deficiencies were noted.
- Fishery, Wildlife and Conservation Ecology - protocols and standard operating procedures were present. IACUC certificates were available; one was expired and will be replaced with the updated certificate. Safety trainings were up-to-date. No fish were present in the research lab. In the teaching room, all fish appeared healthy. Ceiling tiles have been replaced after the notation in the previous inspection report.
- Livestock Entomology – procedures, logs, and certification were up-to-date. One active study was in progress, with nine cattle in the main building. An event was noted of a missing heifer that escaped as it was being moved into the building. The heifer has a brand and had not yet been treated with any study substances, and the livestock inspector was notified. In the outdoor pens, all animals appeared healthy, with clean water and pen conditions. A recommendation was made for the researchers to work with the sponsor(s) to vaccinate any animals with unknown history.

The animals used in these studies are prohibited from entering the food chain, so must be euthanized. Depending on the study, the heifers can be used for other purposes on campus, with careful documentation that the euthanasia and final disposition is according to the original study agreement.

Committee members noted that new fencing has been installed around the feed storage structure to exclude rabbits and other pests.

- Horse Farm – the active protocol, standard operating procedures, and daily logs were available. Records of IACUC certification and occupational health program were not on

site for the personnel on the protocol, since the Principal Investigator keeps these at another location. The IACUC certification is not required if personnel are not involved on a protocol. Facility personnel are required to complete the safety training, and are offered tetanus vaccination. No deficiencies were noted in the facilities or care. Veterinary care and farrier service are available. The water system has been improved.

- An additional comment was made about the unused autoclave unit in the animal care facility. The estimated cost to connect and recertify it for use, even if a steam system was installed, is more than \$15000. The unit will have to be sent to property for disposal.

5. Protocol Reviews and Process

A handout was distributed with the definitions of minor deficiency and significant deficiency, from the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals.

This year to date, 25 protocols have been submitted. Four have not yet been approved. Of these, two did not submit training records or edits, and two were sent out this week. This number of protocols is less than what has been seen in previous years. Many current protocols are expiring in 2018, and most of these are expected to renew. We have protocols for cattle, brush mice, equine, deer; the majority of protocols come from Animal and Range Science, followed by Fish and Wildlife.

6. Occupational Health and Safety Program for Animal Workers

Animal Worker Safety training classes are held monthly at Environmental Health and Safety. These classes focus on zoonotic disease and respiratory hazards. All personnel on IACUC protocols are offered tetanus vaccination. The nurse practitioner at Campus Health Center has changed, and she is very responsive to send reports for records to EH&S. Researchers can contact the Biosafety Manager to obtain a certificate of training and occupational health enrollment if a copy is needed at the location of the animal study. PIs who are not active on a study may not have current certificates.

7. Compliance Status (USDA, OLAW)

- a. Assurance to OLAW is current and approved until 2020.
- b. Annual report to OLAW is due Jan 30, 2018.
- c. The USDA-APHIS annual facility report is due Dec 1, and will be submitted with a report of no covered animals. The USDA inspector was here this past week, and sent a report of no findings.

8. Semi-Annual Report to the Institutional Official (IO)

The Chair informed the members that the semi-annual report must be submitted to the Institutional Official as required by the PHS Policy on Humane Care and Use of Laboratory Animals and as a condition of the institution's Animal Welfare Assurance on file with the Office of Laboratory Animal Welfare (OLAW), and the USDA Animal Welfare regulations. The report certifies to the Institutional Official that the committee met on November 2, 2017, conducted a review of the animal care and use program

following the OLAW Semiannual Program Review Checklist, and conducted inspections of the animal facilities on November 1 and 2, 2017. The report will note minor deficiencies in the Animal Care Facility, and that the manager of the Animal Care Facility had been notified of the deficiencies, and a minor deficiency in the Biology Annex with a recommendation to correct the drainage in the budgie area. The report was approved by the Committee members and will be sent to the Institutional Official, Dr. Vazquez.

A semi-annual report was prepared to the Institutional Official for the Jornada Range facilities. The report of facility inspection and program review was approved by the IACUC and will be submitted to the research leader, Brandon Bestelmeyer.

9. Additional Items

The General Obligation bond for 2018 includes a new animal facility. We are optimistic that voters will approve funds for this, as well as a new feed mill and food science facility. Pictures and plans for the facility will be available for the spring meeting, once the governor approves the GO bond items.

10. Adjourn: The fall meeting of the IACUC adjourned at 4:29 p.m.

Minutes accepted and approved by:

Dr. Shanna Ivey, Chair

cc: Dr. Luis A. Vazquez, Interim Vice President for Research

IACUC Applications 2017

No.	PI	Dept	Anim	Title	Recd	Sent	Act	Date	Length	PHS
001	Ivey	ANRS	Cattle	Oligosaccharide composition in milk	1/27	1/27	A	2/9	1/17 to 1/20	No
002	Summers	ANRS	Sheep	ANSC 428	1/27	2/01	A	2/16	2/17 to 1/20	No
003	Summers	ANRS	Cattle	AI cattle management	1/27	2/01	A	2/10	2/17 to 1/20	No
004	Desmond	FWCE	Birds	Nest survival of yellow-headed parrots	1/27	2/01	A	2/16	2/17 to 1/20	No
005	Desmond	FWCE	Birds	Assessment of burrowing owls in urban locations	2/03	2/09	A	2/22	2/17 to 1/20	No
006	Wright	BIOL	Birds	Evolutionary response in an invasive parakeet	2/06	2/06	A	2/22	2/17 to 1/20	No
007	Roemer	FWCE	Puma	Puma concolor behavior	12/05 /16	2/16	A	3/02	3/17 to 2/20	No
008	Caldwell	FWCE	Fish	Effect of fire on fish communities	3/02	3/02	A	3/22	3/17 to 2/20	No
009	Roemer	FWCE	Mammals	FWCE 330 and FWCE 431	3/03	3/10				No
010	Montanez	FCS	Equine	Equine Assisted Activities	3/26	3/30		3/26		No
011	Summers	ANRS	Cattle	Inseminations beef/cow fertility	5/11	5/17	A	8/24	8/17 to 7/20	No
012	White	ANRS	Equine	Chaff on digest /compar to alfalfa diet in/mature horses	5/24	5/25	A	6/30	6/17 to 5/20	No
013	J.Gifford	ANRS	Cattle	Impacts of intra-ovarian WNT3Afolliculogenesis	6/11	6/14	A	7/11	7/17 to 6/20	No
014	Smythe	CAH&FS	Cattle	Eval insecticide formulations against arthropods ag anima	7/11	7/18	A	8/17	8/17 to 7/20	No
015	Soto	ANRS	Cattle	Effects supplemental digestibility cattle consuming	7/12	7/18	A	8/17	8/17 to 7/20	No
016	Mabry	BIOL	Brush Mice	Variation in Dispersal thru Social Landscape Causes & Consequences	7/20	7/27	A	8/17	8/17 to 7/20	No
017	Loest	ANRS	Cattle	Effects of glycerin suppl drench on hlth & perf of feedlot recvng calves	8/1	8/3	A	8/31	8/17 to 7/20	No
018	Nish	BIOL	Squid	Evolutionary & ecolog drivers of beneficial associations	8/27	8/31	A	10/10	10/17 to 9/20	No
019	Campbell	ANSC	100	ANSC 100 Lab class Intro to Animal Science	8/27	8/31	A	9/14	9/17 to 8/20	No
020	Ashley	ANSC	Cattle	Elucid funct roles during preg in livestock	8/31	9/14	A	10/10	10/17 to 9/20	No
021	Wright	BIOL	Birds	Role of FoxP2 in neural plasticity adult voc lng and soc integration	9/21	9/21	A	10/18	10/17 to 9/20	No
022	White	ANSC	Equine	Equine assisted activities w/horses	9/26	10/10	A	10/30	10/17 to 9/20	No
023	Bender	CES-Ext ANRS	Deer	Movement of male Mule deer in a ranch context	9/26	10/10	A	10/30	10/17 to 9/20	No
024	Caldwell	FWCE	Fish	Gila Trout populations						
025	Desmond	FWCE	Birds	Avian Field Ecology						

Obtained by Rise for Animals