

Chacoan Peccary Introduction at Sedgwick County Zoo

The successful introduction of
1.0 to established 1.2
father/daughter group

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The Players

Who's who at Sedgwick County Zoo

The Facility

Where it all took place

The Process

A look at the introduction plan and necessary modifications to facility

The Introduction

A timeline of the events



The Players:

Buck

1.0 born 1999

Arrived at SCZ in 2002 for breeding

Kaiya

0.1 born 2008 at SCZ

Daughter of Buck, Sister to Toni

Toni

0.1 born 2010 at SCZ

Daughter of Buck, Sister to Kaiya

Karl

1.0 born 2009

Transferred to SCZ in 2021 as SSP breeding rec
for both Kaiya and Toni





What about Buck?

- One of the oldest peccaries in the population (22 at time of introduction).
- Was Buck healthy enough to handle the stress and physicality of introduction to a new individual, specifically a younger male.
- Prior to introductions, received a full veterinary work-up.
- Diagnostics indicated that despite some issues, he was in great health and should be able to handle introductions.
- Medical challenges included:
 - Compromised eyesight
 - Limited dentition

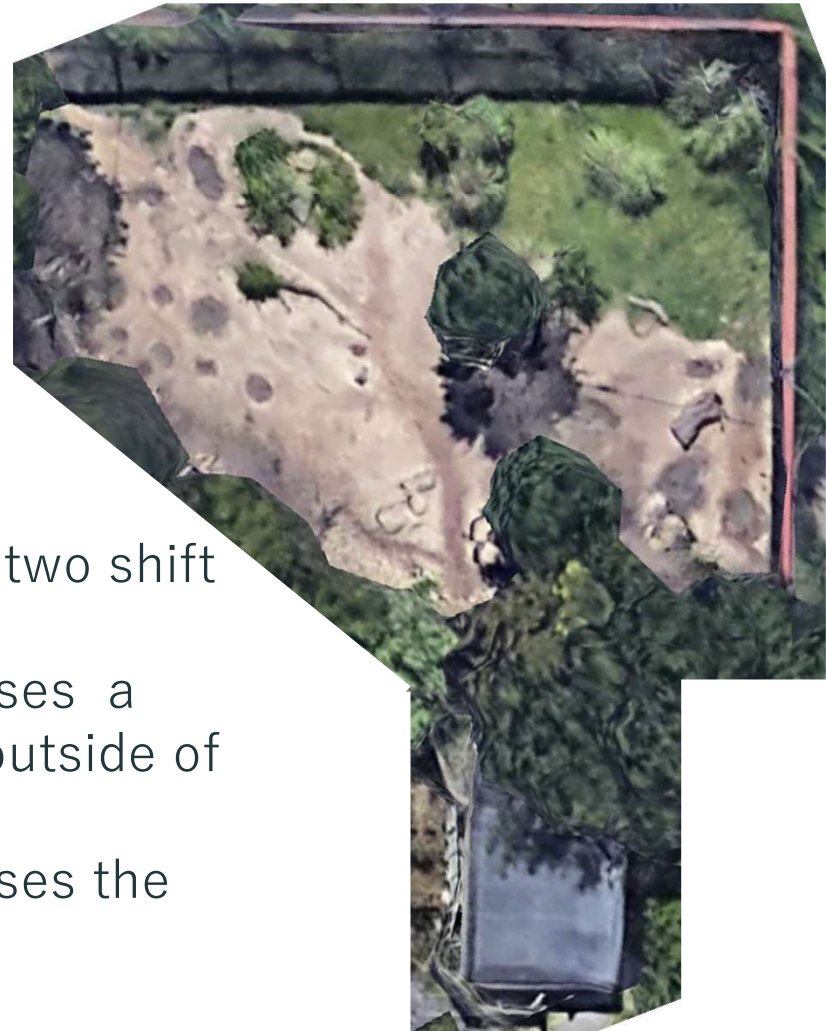
The Facility:

Exhibit:

- 4400ft² open air enclosure with vegetation and boulders providing visual barriers and round-about.

Holding:

- Four linear stalls, each $\approx 50\text{ft}^2$, with two shift doors between each set of stalls.
- Stall 1 has a single door that accesses a transfer chute that runs along the outside of building to the exhibit.
- Stall 4 has a single door that accesses the transfer chute near exhibit entry.





The Peccary Exhibit





The Transfer Chute





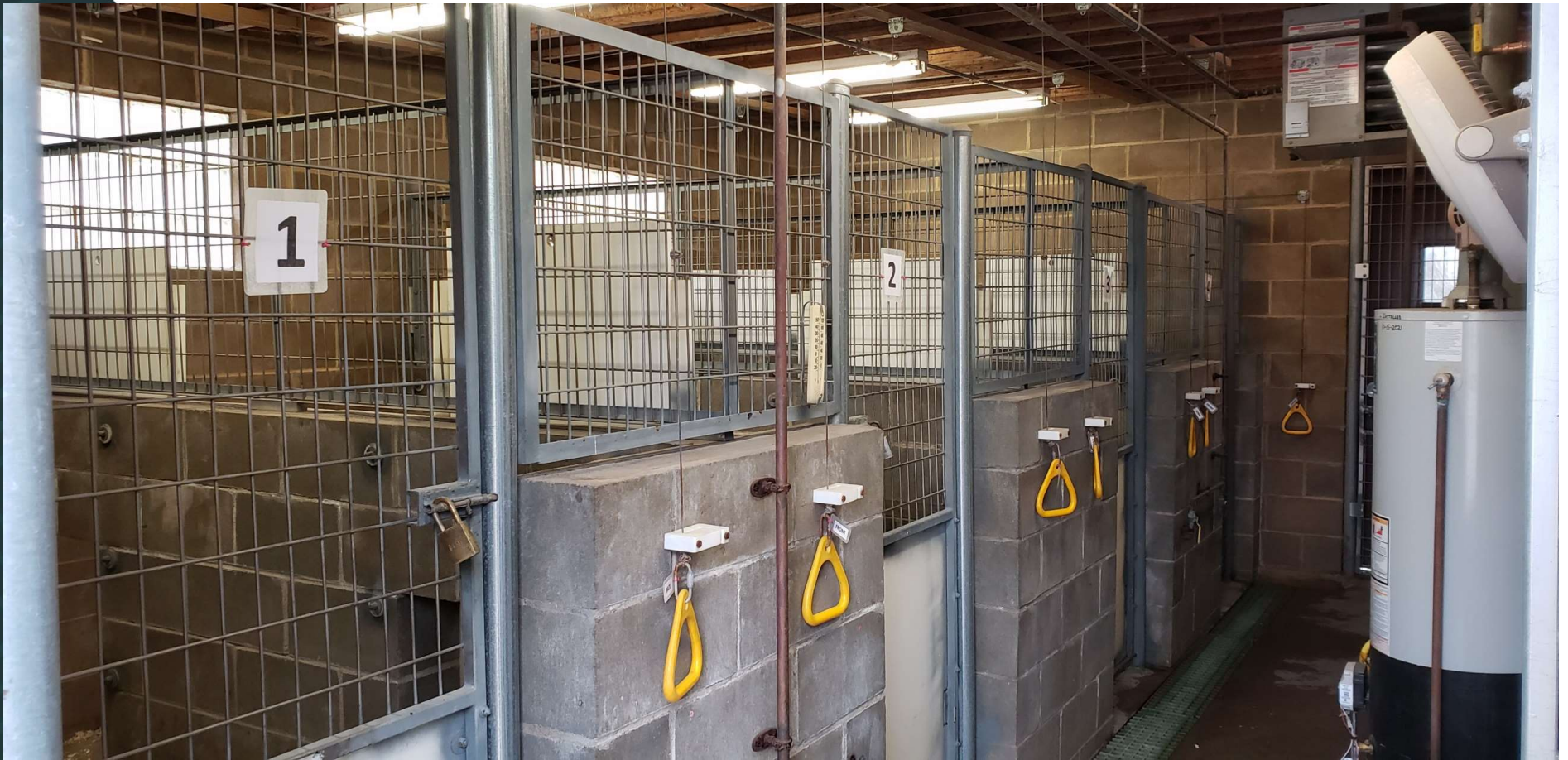
Stall 1 Entry to Transition Chute





Stall 4 Entry to Transition Chute





Peccary Holding





Peccary Holding Stall



The Process:

Gathering Information

SSP was contacted to learn more about what to expect during peccary introductions.

Writing the Plan

An introduction plan was written and approved.

Making Preparations

Modifications were made to exhibit and holding to better facilitate the introduction.



Chacoan peccary SSP was contacted to gain insight about what to expect during this kind of introduction. Jim and other experts provided great advice including:

- Planning for a slow, multi-stepped howdy process.
- Avoiding starting/stopping the introduction process.
- Being prepared for chasing and fighting upon full intro.
- Installing better visibility of exhibit perimeter fencing.
- Encouraging social feeding behavior throughout process.

An introduction plan was developed utilizing the compiled information.



The Introduction Plan included:

- Basic information about the individuals involved.
- Tasks to be completed before Karl was moved to the building including several modifications the facility.
- Where individuals would be housed for howdy introduction.
- Process and set up for howdy and full contact intros.
- Parameters for progression –using observed behavior to determine when to proceed to next step of introduction.

The plan was reviewed and approved by keepers, curator, and veterinary staff.



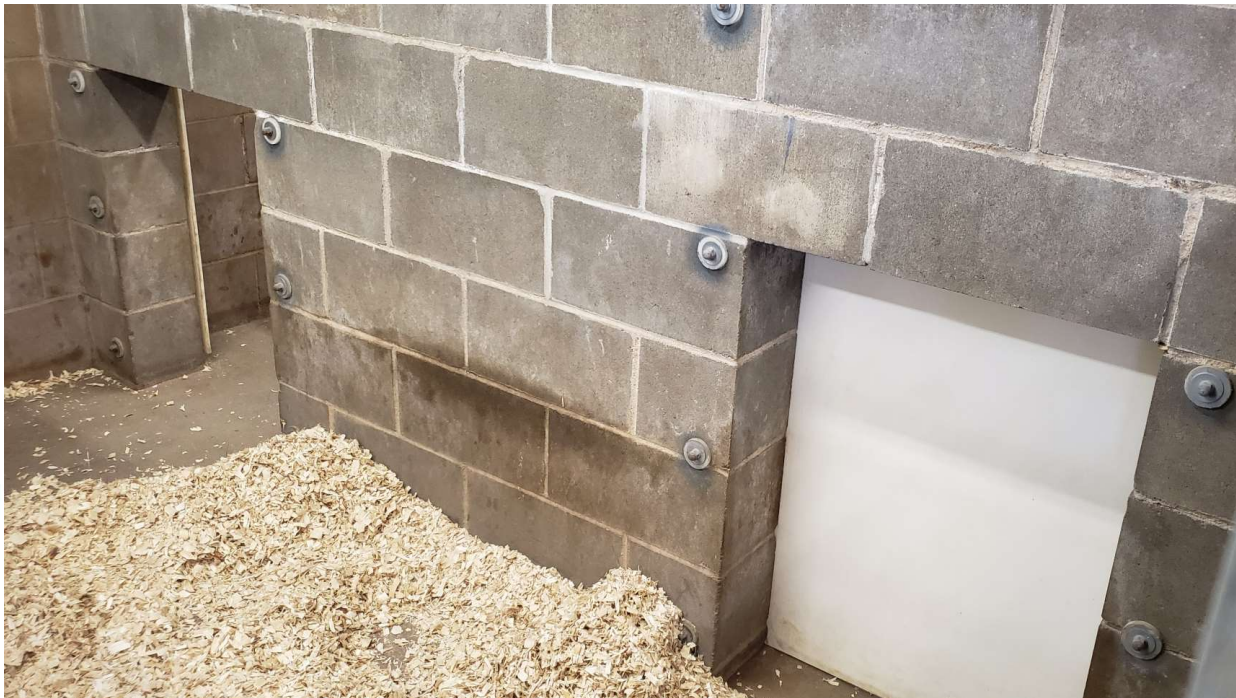
Modifications to the facility

Snow fencing was placed on the outside of the entire perimeter of the exhibit to improve visibility of the containment fence.



Modifications to the facility

Creating howdy doors out of doors that had no mesh or partial-open option.



Modifications to the facility

Mesh panels were installed on both doors between stalls 2 and 3 in holding to create the howdy.



Modifications to the facility

6" plywood "shingles" were zip tied in place. These could be removed individually to expose increased howdy view gradually.



Modifications to the facility

Doors were put in place in the outside transfer chute to create a buffer between the outside spaces of the two groups.

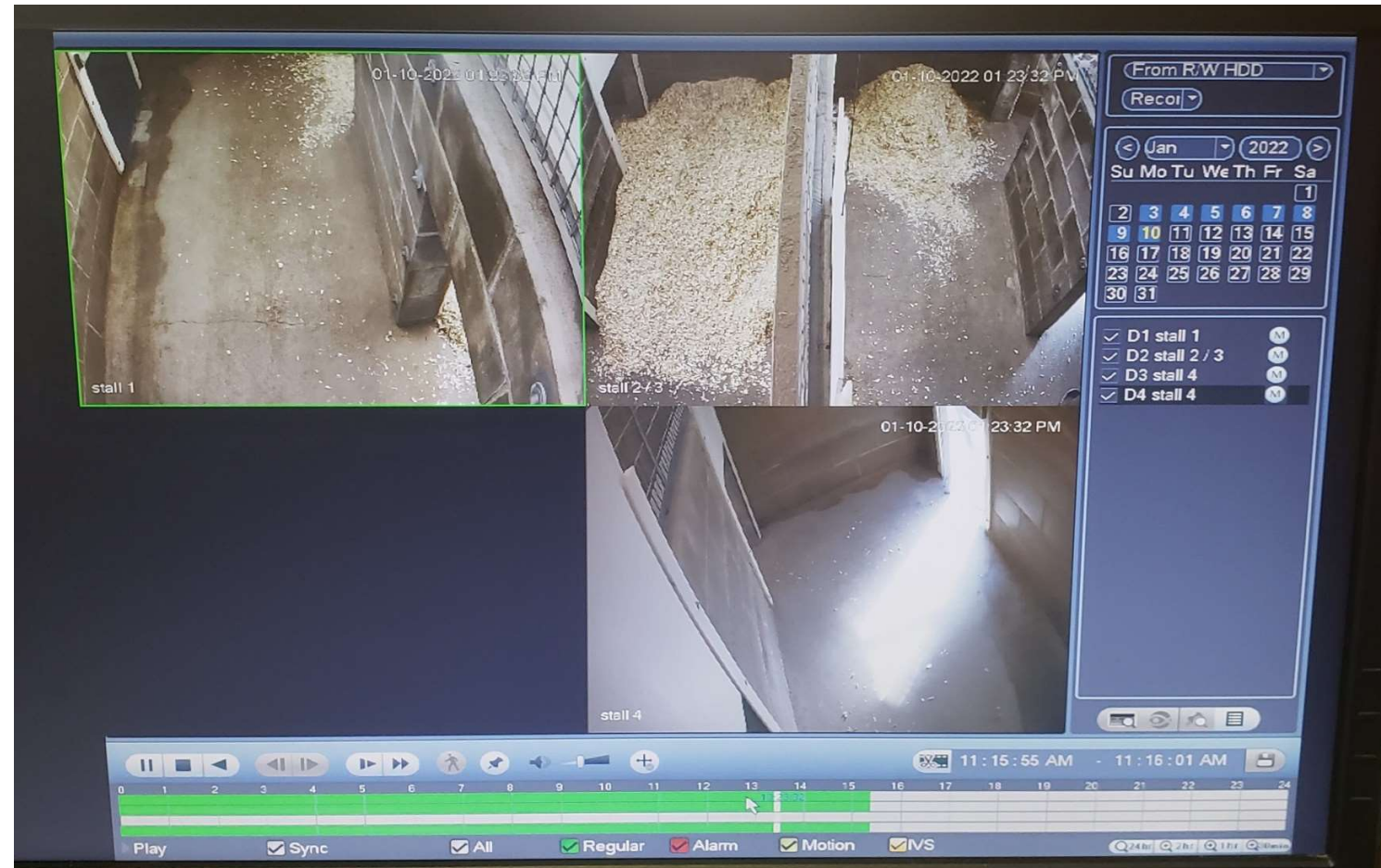


These doors were secured in true zookeeper - MacGyver fashion with ½” plastic wedged in place.



Modifications to the facility

CCTV DVR system was installed in holding for 24/7 monitoring.



The Introduction:

Prior to Karl's move to the building
Feces and bedding were swapped

Karl's acclimation to the building
Karl's move from quarantine

Howdy introduction

Slow progression of howdy intro between Karl
and the family group

Karl's acclimation to the exhibit

Groups swapped to give Karl time to explore
exhibit

Full contact introduction

Putting everyone together



Step 1: Pre-intro and 1.2 management change

- Once Karl was cleared from quarantine but prior to his move to the peccary building, feces and soiled bedding were swapped between groups to introduce scents of the other group.
- The 1.2 group management was changed to how they would be managed when Karl arrived at the building. They were locked down to holding stalls 3/4 (with access to the exhibit) and all feedings took place inside.



Pre-introduction

Feces were swapped between the two groups. (There's someone new in town.)



Step 2: Karl was moved to the peccary building

Day 1

- Karl was moved to the peccary building and given access to stalls 1 and 2. No outside access that first night.
- The 1.2 group had access to the exhibit and stall 4. Stall 3 was left empty and all shift doors between the groups were closed. This was done in case there was undesirable activity at the closed shift doors overnight.

CCTV observations

Each morning the DVR was reviewed for activity and behavior from overnight. Relevant information was documented in ZIMS.



Step 2: Karl is acclimating and shifting

Day 2

- Karl was given access to his part of the outside transition chute area.
- The 1.2 group was given access to stall 3.
- Both shift doors between stalls 2 and 3 were kept closed.

Management Note

Keepers started working on shifting Karl and acclimating him to the building environment, doors moving, keeper activity, etc.

Days 6 & 7

- All individuals were coming and going from holding, eating and resting normally while the other group was inside.

This was the behavior we were looking for to start howdy access.



Step 3: Howdy introductions begin

Day 7

- Front shift door between stalls 2/3 was opened providing 6" of howdy access.
- All peccaries were locked inside before the door was opened.
- Everyone investigated the door area, but at different times so no interactions were observed.
- All were given access to respective outside space after 30 minutes.
- Howdy was left open overnight.

Day 8

- Front shift door was opened to allow 12" howdy access.
- 1.2 showed interest in increased visibility to Karl's area, scratching at the floor and pulling on the mesh with their mouths.
- Karl saw others at howdy from stall 1 and retreated outside.
- At PM feed, all were inside eating but not within view of each other.



Step 3: Howdy introduction

Days 8 & 9

- Overnight DVR showed slow progression of Karl and 1.2 in holding at the same time and seeing each other. Karl got his first look at one of 1.2, presumably one of 0.2, and his interest in the howdy mesh increased after that. At one point Karl was face to face with all of 1.2 at the same time.
- Short bluff charges were observed by members of the 1.2 group.
- Howdy remained at 12" opening on front door. Rear door remained closed.



Step 3: Howdy introduction

Day 11

- First time since howdy was opened that all of 1.2 came into holding and allowed door to be closed behind them.
- Overnight DVR showed lengthy interaction at howdy involving all individuals. Significant increase in scent marking of walls by 1.2 group.



Step 3: Howdy introduction

Day 14

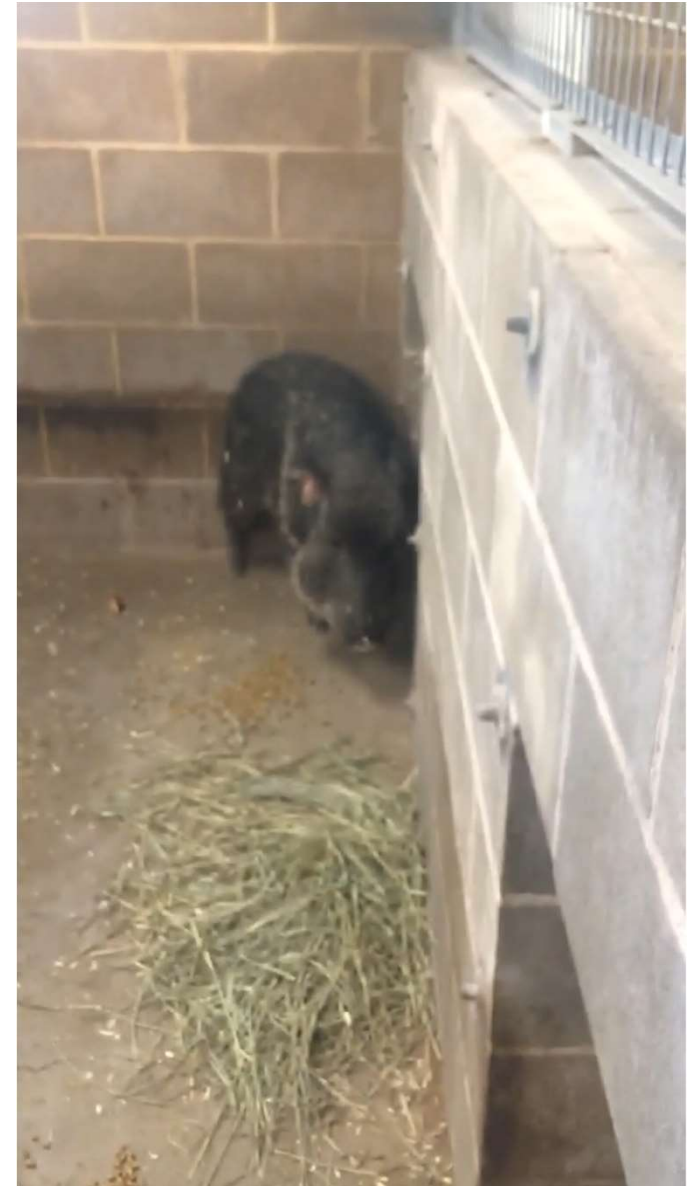
- Interactions continued to be non-aggressive but also non-affiliative. Karl was staying out of sight of 1.2 most of the time with short bouts of him at the howdy with at least one of 1.2 group.
- Rear shift door between stalls 2/3 was opened providing 6" of howdy access. (Front door remained at 12" howdy.) This limited "hiding" from others behind rear shift door, however avoidance was still possible by staying in other stalls. Keepers started feeding Karl part of his diet in stall 2 while 1.2 group was fed part of diet in stall 3, on either side of 6" howdy to encourage social feeding behavior.



Step 3: Howdy introduction Feeding at howdy door

Day 15

- Overnight DVR showed no negative interactions.
- Rear shift door between stalls 2/3 was opened to 12" howdy.



Step 3: Howdy introduction

Day 22

- No aggressive interactions at howdy doors; no affiliative interactions either.
- Howdy at front door was increased to 18", rear door remained at 12".

Day 27

- All interactions had been taking place at the rear howdy so the rear howdy was increased to 18"; front howdy remained at 18".

Day 35

- Both front and rear howdy doors were fully opened allowing for full visual through mesh. All individuals were observed scent marking on or near mesh at rear door. All interactions were non-aggressive.

Day 45

- All individuals resting in adjacent stalls, not in close proximity but visible to each other. Karl seeking out others.



Step 4: Trading spaces and Karl's acclimation to exhibit

Day 57

- Karl was moved to Stall 4 and given access to the exhibit for the first time.
- 1.2 were moved to stalls 1-3.
- Howdy panels were moved from doors of stalls 2/3 to stalls 3/4 to give the 1.2 group additional space while locked off exhibit since the available outside space was limited.

Day 58

- Overnight DVR showed Karl spent most of the night in stall 4
- 1.2 spent part of the night in stall 3.
- No significant interactions at howdy doors.

Day 60

- Overnight DVR showed Karl sleeping in stall 4 next to howdy door and 1.2 resting within a foot of the howdy.

This was the behavior and proximity we were look for to determine when we were ready to move to full contact introductions.



Step 5: Full contact introductions

Day 62

- AM diet was fed as normal in holding. Some of diet was held back along with enrichment treats to be available for distraction if necessary.
- Doors in outside transfer chute were removed and howdy panels were removed.
- 1.2 were given access to the exhibit while Karl was on exhibit. Care was taken that Karl was not distracted when they were given access and he knew they were coming. All of holding and transfer chute areas were opened to provide multiple roundabouts.



Step 5: Full contact introductions

Day 62

- Chasing started almost immediately, and the last chasing bout was observed about 30 minutes after doors were opened.
- Combat interactions were observed between Karl/Kaiya, Karl/Buck, and Kaiya/Toni.
- As a result of those interactions with Karl, Buck spent time with his back in a corner while others interacted.
- No significant injuries occurred.
- Affiliative behavior observed between Karl/Toni including grooming.
- All individuals came and went from holding throughout the day.









Step 5: Full contact introductions

Day 62

- At the end of the day Karl/Kaiya/Toni were roaming the exhibit together.
- Buck was by himself, vocalizing at anyone that came near him, possibly not being able to readily recognize who was approaching.
- 2.2 were left together overnight with access to all spaces.

Management Note

Buck was started Meloxicam treatment for general soreness from increased activity during full contact introductions.



Step 5: Full contact introductions

Day 63

- 2.2 were all in holding at first check.
- Group was observed laying within close proximity and affiliative behaviors were observed between some individuals.
- PM feed took place at usual location on exhibit where keepers could feed Buck extra diet while tossing food to others. Karl followed the others and ate with them.





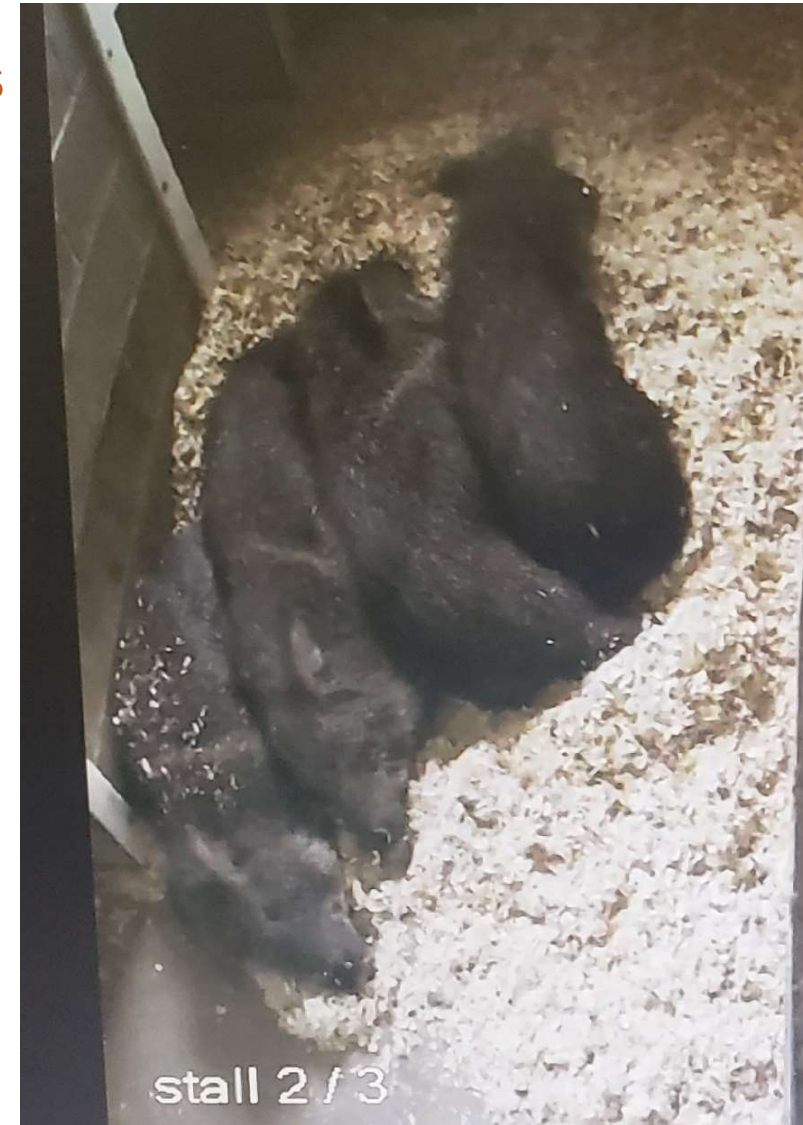
Step 5: Full contact introductions

Day 65

Overnight DVR showed 2.2 sleeping in the same stall as well as bouts of 0.2 resting with each of the 1.0 separately.

Management Note

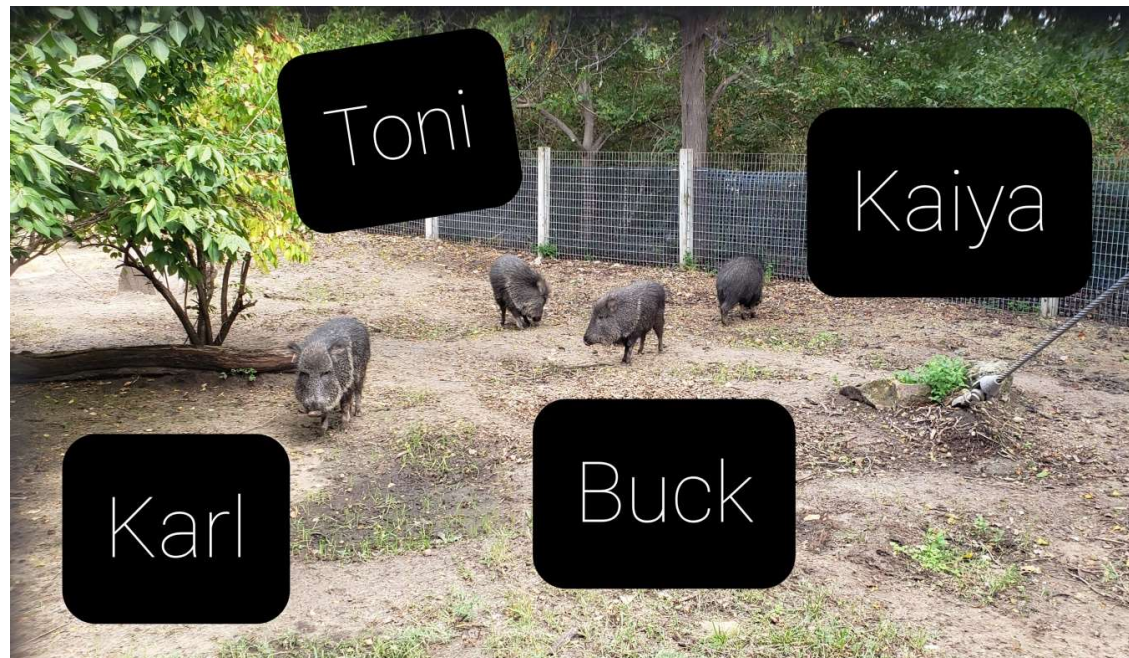
Keepers started feeding AM diet in holding to work on Karl shifting into holding with 1.2.



Step 5: Full contact introductions

Day 68

- 2.2 shifted into holding in AM and were locked in together for the first time while exhibit was serviced. Everyone was calm and quiet while locked inside.
- Introduction was considered complete and a success!



Keys to Success

Information provided by SSP and experts

Information from those who had experience with peccary introductions prompted the revision of our introduction plan. Expecting a slow progression through the howdy process allowed us to modify the facility accordingly; and staff was better prepared to see aggressive behavior during full contact introductions.

CCTV DVR

Our peccaries behave very differently in holding when keepers are present. Being able to watch the peccaries both live and recorded through the CCTV DVR was instrumental in knowing when the next step could take place.



Keys to Success

Using animal behavior to determine when to move forward

Relying on our observations of behavior to determine when to move to the next step of our plan was imperative to success. Lack of aggression, perceived indifference, and social proximity were all factors in decisions to move forward.

Exhibit closure

The South America exhibit was closed to guests beginning in March of 2021 for multiple construction projects. Planning the timing of the introduction around these projects was tricky but having the exhibit closed allowed the time necessary for a slow introduction without pressure to have animals on exhibit.



Thank You:

Jim Haigwood and the Chacoan peccary SSP for their willingness to share their knowledge and expertise.

Sedgwick County Zoo Chacoan peccary keeper staff for their creativity and patience through this introduction process. And for their fantastic record keeping, photos, and videos.



Questions?

