

# **Report on the 1999 Swift Fox Releases onto the Blackfeet Tribal Lands, Montana**



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for  
Cochrane Ecological Institute  
Blackfeet Fish & Wildlife Division  
Defenders of Wildlife  
Montana State Fish, Wildlife & Parks Service**

## **Introduction**

On the 29th of August 1999 the second set of swift fox reintroductions to the Blackfeet Tribal Lands, MT, took place. In the previous year, 30 captive-bred foxes were released, and in a follow-up survey showed signs of both survival and reproduction in the wild. This year a total of 15 foxes were released, consisting of 12 adults, and 3 kits born that spring. Of the 12 adults, eight were radio-collared, with collars donated by the Montana State Fish, Wildlife & Parks Service. The foxes were monitored for a three week period after the release by a graduate student, and a number of volunteer workers who were available for varying periods of time. The releases were again the result of a joint project run by the Cochrane Ecological Institute, the Blackfeet Fish & Wildlife Division, and Defenders of Wildlife, with the inclusion of a graduate student from The Queen's University of Belfast.

## **Saturday 28th August 1999**

All volunteers arrived at the release site at the Blackfeet Tribal Ranch. The ranch is situated approximately 20 miles south east of the town of Browning within the Blackfeet Reserve, Montana. The foxes were watered, then taken to each individual release site and placed next to the portable protective shelter (PPS) allocated to that site. Once they were in place they were fed with chicks. The sites were as follows:

<b>Release Site (GPS)</b>	<b>Volunteer</b>	<b>Foxes</b>	<b>Radio Frequency</b>
1. N48° 30.266 W112° 37.468	Lisa & Betty Flaman	Jasper m S939 Jessica f S943 Julian m S945	multi-coloured cat collar pink cat collar green cat collar
2. N48° 30.194 W112° 37.543	Sam Bremner Stephen Harrison	Ira m S928 Inamorata f S936	150.163 150.155
3. N48° 30.175 W112° 37.624	Tamie Hucal Sandy Hucal	Inquiry m S937 India f S923	150.173 150.193
4. N48° 30.176 W112° 37.826	Clio Smeeton Ken Weagle	Hellfire m no tattoo Fawcett f S487	no collar no collar
5. N48° 30.024 W112° 37.528	Ben McLeod	Ingot m S919 Halma f S599	no collar no collar
6. N48° 29.974 W112° 37.117	Dennis Jorgenson	Epharisto m S448 Georgina f S553	150.093 150.073
7. N48° 30.166 W112° 37.205	Minette Johnson	Indiana Jones m S925 Hedwig f S578	150.147 150.184

**Sunday 29th August 1999**

Weather - cool in the morning, heats up around 11 am, stays very hot and dry all day

**Site 1 Observer - Lisa Flaman**

- 07:02 - Swift fox appears running from another site from the south
- 07:04 - Disappears to the north towards the river valley
- 07:12 - Pink kennel bouncing around
- 07:25 - Fox running from the direction of Sam's site towards out site. Stopped when saw us then ran towards the SE. Stopped a couple of times to look around.
- 07:43 - Fox exploring 200m away to the east
- 08:00 - Fed more chicks
- 08:07 - Kennels opened
- 08:07 - Jessica ran from kennel
- 08:07 - Jasper ran from kennel
- 08:09 - Julian emerged slowly from kennel
- 08:10 - Jessica and Jasper exploring west, moved out of sight
- 08:11 - Julian checked out other kennels
- 08:11 - Julian went into PPS
- 08:11 - Came out of PPS
- 08:12 - Jasper & Jessica spotted over towards river valley
- 08:12 - Julian exploring around kennels
- 08:13 - Eats a chick
- 08:14 - Moves a little bit away from PPS, lies down
- 08:15 - Explores holes, and eats more of the chick
- 08:17 - Stops eating, scent marks next to kennel
- 08:20 - Jessica reappears from the west
- 08:21 - Jessica & Jasper run along east along the side of the river valley
- 08:21 - Julian continues exploring
- 08:22 - Jessica reappears running back towards the west
- 08:23 - Julian explores a bit further moving slowly
- 08:24 - Scent marks a mound of dirt/hole
- 08:25 - Catches a grasshopper
- 08:29 - Sniffs at kennels
- 08:30 - Explores holes in area
- 08:30 - Is startled by something and runs back to shelter of PPS
- 08:31 - Rolls on ground (scent-marking)
- 08:32 - Moves away, and back to PPS, explores a bit further each time
- 08:35 - Goes into PPS and out other side
- 08:38 - Rolls at a hole and starts to dig
- 08:42 - Still investigating around hole
- 08:45 - Rolls on hole
- 08:50 - Rolls on hole
- 08:58 - Sniffs kennels, returns to hole
- 09:03 - Investigating around hole
- 09:13 - Digs around hole
- 09:18 - Chews on something

09:21 - Lies down by hole  
09:22 - Moves to PPS  
09:23 - Moves back to hole  
09:30 - Wind picks up  
09:32 - Moves into PPS  
09:34 - Back to hole  
09:39 - Rolls on dirt pile  
09:41 - Sits by PPS  
09:42 - Goes into PPS  
09:44 - Comes out of PPS  
09:48 - Into PPS  
09:50 - Out of PPS  
09:54 - Catches grasshopper  
09:56 - Rolls on hole  
10:00 - Gets chick from PPS  
10:04 - Catches insects  
10:05 - Rolls on dirt mound  
10:08 - Exploring  
10:09 - Moves towards observer, startled and runs back  
10:10 - Moves closer towards observers, startled again and runs back  
10:12 - Explores further away from PPS, eliminates (scat), gets scared and runs back  
10:24 - Catches grasshopper

**Observer - Betty Flaman**

10:27 - Digs at PPS entrance  
10:39 - Eats another chick  
10:51 - Moves in and out of PPS, possibly getting too hot  
10:52 - Comes out of PPS and travels south for about 50m before running back to PPS and going inside

**Observer - Lisa Flaman**

11:10 - Exploring area further away, ran back when startled  
12:35 - Hanging around PPS  
15:59 - Hawk swoops down east of campsite  
20:15 - Julian comes out of PPS when sun goes down  
20:18 - Hawk flies overhead  
20:29 - Moves away and back to PPS, goes a little further each time  
20:30 - Bird flies overhead - dove?  
20:35 - Julian runs back and forwards from PPS to increasing distances away  
20:45 - Watches me as I come closer to observe him  
20:50 - Still watching as I move, distracted by a grasshopper  
20:52 - Trots past towards campsite, gets halfway there then runs back  
20:54 - Runs NE, hard to see  
20:55 - Moves about 200-300m away, out of site  
20:57 - Investigating mound  
21:45 - Julian at PPS, scan with light and see another fox  
22:10 - Julian at PPS, moves in and out again  
22:55 - Julian at PPS, another fox in the north  
23:07 - Julian at PPS watching me  
23:10 - Back at mound of dirt/holes  
23:11 - Trotting around den area

- 23:12 - Watches light on hill by Sam's site
- 23:14 - Goes into hole, comes out immediately. Hangs around PPS
- 23:16 - Running all around area up to 50 m from PPS, explores mound of dirt north from den
- 23:19 - Plays with food, throws chick up in air
- 23:20 - Back into PPS
- 23:21 - Out of PPS
- 23:23 - Eating something and watching light in NW (Tamie?)
- 23:24 - Rolling in dirt by PPS entrance
- 23:25 - Playing with chick by PPS entrance
- 23:26 - Pouncing, jumping and sniffing around
- 23:28 - Coyotes howling, Julian very alert
- 23:29 - Sitting then lies down, still alert, ears up and forward, sits up
- 23:30 - Playing, pouncing, goes into PPS, comes back out
- 23:31 - Nudging PPS with head
- 23:32 - Bird chirps, Julian looking around still very alert
- 23:39 - Sitting by PPS
- 23:50 - I set up a site to sleep at 25-30m from PPS, Julian runs a bit away then returns and comes halfway towards me making a humming/purring noise
- 23:53 - Comes as close as approx. 5 steps still making noise
- 23:56 - Investigating around PPS
- 00:00 - Walks away from PPS, returns
- 00:04 - Sitting by PPS, then ventured to NE mounds and back
- 00:10 - Comes within 5 steps to me
- 00:23 - Moves south from den, runs back
- 00:25 - Come towards me and back to den, moves to N mounds
- 00:26 - Coyotes making lots of noise to the west
- 00:30 - Moves from mounds to within 2 steps of me and runs off
- 00:40 - Can't see anything
- 00:48 - Think Julian is in PPS as thumping noised coming from that direction
- 01:00 - Walked around and checked Sam, Tamie, and Clio's sites - no foxes
- 01:25 - Julian near PPS
- 01:46 - Noise from PPS
- 04:04 - Hanging out by PPS
- 04:09 - In PPS
- 04:10 - Comes out of PPS
- 04:12 - Sitting by PPS looking towards W, goes into PPS
- 04:14 - Comes out of PPS
- 04:19 - Into PPS then out again
- 04:22 - Back into PPS, bangs around
- 04:24 - Comes out and wanders around PPS
- 04:25 - In PPS, out again
- 04:30 - Hanging out By PPS

## **Site 2 Observer - Samantha Bremner**

- 07:20 - Fox appears on ridge from SW, probably from either Tamie or Clio's site
- 07:25 - Kennel doors opened, Ira out of kennel immediately
- 07:26 - Inamorata out of kennel, both foxes exploring immediate area

- 07:28 - Scent mark, still exploring immediate area
- 07:29 - Go in and out of PPS, still exploring, very alert
- 07:31 - Move together south up to the ridge of hill, both startled by something and run back to PPS
- 07:32 - Continue to explore, gradually moving up towards the ridge, run back towards the PPS
- 07:35 - Repeat this a few times, moving further away each time
- 07:40 - Disappear south over the ridge to the left of the den box
- 07:42 - Large, uncollared fox appears over the highest point of the ridge moves NE towards tent and continues out of sight in this direction

**Observer - Stephen Harrison**

- 08:12 - Large uncollared fox runs right past tent and towards PPS, sniffs at rock next to the kennels.
  - 08:13 - Sniffs kennels then goes into each one for around 30 seconds each.
  - 08:15 - Goes into PPS
  - 08:16 - Comes out of PPS, explores around it, is disturbed by something and runs back across release site and disappears
  - 08:27 - Fox, possibly with collar, appears on ridge south of PPS, runs SW along ridge for around 20m before disappearing
- No more fox sightings all day

**Observer - Sam Bremner**

- 21:45 - Fox moving NW towards site 3, possibly a cub
- 23:15 - Go up on ridge to see if any foxes there, one fox at the top of hill which circles me, getting closer and closer. Is disturbed by Stephen coming to tell me that foxes have returned to PPS and runs away.
- 23:16 - Two foxes at PPS, move off out of sight
- 23:50 - No foxes at PPS or surrounding area, go to top of hill again and see one fox towards Ben's site (site 5).
- 01:15 - No foxes
- 03:30 - No foxes
- 05:25 - No foxes

**Site 3 Observers - Tamie and Sandy Hucal**

- 06:15 – Coyotes yipping along river N of site
- 07:17 – India left kennel, sniffed about and headed west over the hill
- 07:23 – Inquiry left kennel, stayed to defecate around immediate area until 07:33. Followed India for approx 30m, then returned to A-frame area, then headed east out of sight.
- 07:38 – Pair from the west shows up, both have radio-collars, they check out I & I's release site while moving west.
- 07:45 – One radio-collared fox running about east.
- 08:02 – Two radio-collared foxes meet, running and playing
- 08:03 – One is eating something small
- 08:09 – Rolling and rubbing around on the ground
- 08:23 – Caught up one fox down on flats along river, tonnes of ground squirrels here
- 08:30 – Fox running along ridge SE of release site.
- 10:35 – Grounds squirrel calling beside kennel
- 11:20 – I moved to ridge, see eagle over SE ridge
- 12:15 – Red-tailed hawk hunting in lush flats W to E.

12:27 – A ferruginous hawk high over release site  
17:00 – Removed kennels  
17:30 – Prairie falcon flew over flats  
20:00 – Put 2 chicks in den box  
20:28 – Returned to ridge overlooking flats  
20:35 – Porcupine down on flats  
20:50 – Left ridge, getting too dark to see  
20:57 – One radio-collared fox enters from W, and night hawk flew by  
21:23 – Coyote howling from W  
22:03 – RC fox approached me at my truck, investigated, ate an insect, kept going S towards Ken & to Clio's site, then kept going  
22:10  
01:20 – Spotlighting, say Julian and Lisa, came over, walked to point overlooking river flats to the ridge above Ken and Clio's site.  
02:10 – Checked the den area, 1<sup>3/4</sup> chicks eaten and tracks in dirt around A-frame  
04:40 – Staccato barking from Ken & Clio's site  
04:50 – Two foxes at ridge S of A-frame, dispersed when I turned light on them

#### **Site 4 Observer - Ken Weagle**

07:29 - Hellfire left cage, stayed in area, checked to east of area  
07:36 - Pup appears from east, Hellfire moves over hill to east  
07:40 - Another cub from east with green colour (Jasper) heading west  
07:50 - Animals on hill to west - radio-collared, probably Sam and Stephen's foxes  
08:10 - Fawcett still in kennel

(Clio, do you have the rest of your information as this is all I have, and there's nothing in your notebook?)

#### **Site 5 Observers - Ben McLeod**

07:00 – Foxes both came out right away, but stayed near the A-frame. Explored the area for a few minutes, then started to move out to a radius of 50m within 10 minutes  
07:10 – One fox made a dash towards the north over the hill and out of sight. The other fox followed within a few minutes.  
07:20 – One fox sighted 75m to the SE of den box.  
07:50 – Fox sighted 200m to NE on ridge of hill heading east.  
08:35 – Fox spotted to the N, sniffing, hunting, exploring. Looks relaxed, looks in my direction from time to time, but doesn't look too bothered.

White truck with students driving back and forth seemed to spook foxes after release

09:00 – Fox came towards site from the west with radio collar heading east.

10:15 – Walked to dugout east of site. Collared swift fox scouting pond and having a drink.

10:55 – One radio-collared fox arrives at den, circles den box for about 5 minutes at a 50 ft radius.

Stands on shady side of A-frame to rest for a few minutes, then goes to one of the kennels and

gets a chick, takes it into the shade to eat it.

11:10 – Fox wanders off to the east out of sight. Returns 5 minutes later, rests in shade of A-frame.

12:00 – Picked up kennels, one fox still in shade on west side, not disturbed.

12:45 – Second fox returns to A-frame, goes right in, then comes back out.

### **Site 6 Observer - Dennis Jorganson**

07:40 - Opened Epharisto's kennel, he walks out before the other kennel is opened. Opened Georgina's kennel, she came out, looked around then ran off to the east. Epharisto explored the area then returned to the kennels, explored the PPS. Ate something.

07:49 - Epharisto begins to walk off to the south, scent marks at a few spots about 100m from kennel

07:51 - Begins to come back towards the PPS. Seems to be exploring

07:54 - Returns to site, crawls into large badger hole, comes back out a few seconds later, returns to

07:54 - PPS. Still exploring, seems eager to explore in all directions. Moves about 2m from us.

07:59 - Heads SE and in near ranch fence, goes out of view east over a hill.

08:40 - Spot a fox to the NE quite far away. It begins to run, then stops, looks back then runs off over a hill to the north. See it again a short distance from the previous spot, it lies down in the grass and remains there until disturbed by the Ecotourists when it runs away

09:03 - Another fox spotted to the NE, disappears to the north.

09:20 - Fox approaches from the west, begins to explore area around camp.

09:24 - Another fox approaches from the east where we lost sight of Epharisto along the ranch fence

Fox that approached from the west was resting in the shade when it spotted the other fox. The fox from the west approached the other one, and there was an aggressive encounter. One fox chased the other away, but eventually they both returned to the area. Again, one fox approached the other backwards, and with the tail curled, there was another aggressive encounter. One of the foxes moved toward the PPS while the other remained in the shade at the truck. Eventually it moved out of the shade and began moving north. It watched the other fox near the den site, and then continued north down along the lower edge of the ridge. The other fox reached the PPS and kennels, and began to look inside. It lay down in the shade of the PPS for a short time then began to move towards us again. Once again it explored our camp site and the surrounding area including the gopher holes.

### **Site 7 Observer - Minette Johnson**

(No data available - Clio has sheet/book)

### **Monday 30th August 1999**

Weather hot and dry all day

**Site 1**

**Observer - Betty Flaman**

07:00 - No sign of any foxes, some scat near the PPS, lots of gophers around

09:30 - Still no foxes, wind getting up, getting hotter

11:27 - Hawk flies overhead

18:30 - Feed 9 more chicks

21:12 - One pair of eyes spotted at Ben's site (site 5)

21:16 - One pair of eyes spotted at Ben's site (site 5)

Storm

**Site 2 Observer - Sam Bremner**

07:00 - Mario Bennassi, Brian and Rowanne Crawford, and I went to the wild den site, saw 3 foxes, observed them for an hour or so whilst Mario filmed them.

Wild den site GPS: N48° 29.092

W112° 38.624

11:00 - Back to camp (site 2), into Browning to buy supplies

**Observer - Stephen Harrison**

09:00 - No foxes

09:30 - No foxes

No foxes spotted all day/evening

Storm all evening/night, no observations possible

**Site 3 Observer – Tamie Hucal**

06:30 – Check out Ken & Clio's site, retrieve 2 scats, major home renovations around the A-frame, walk

E along the ridge, and down to river, saw 2 raptor nest sites, 1 in the cliffs above the river (N side),

other at top of a tree. Saw porcupine and ferruginous hawk.

**Site 4**

No data

**Site 5 Ben McLeod**

06:45 – Radio-collared fox returns and goes into A-frame

**Site 6**

No data

**Site 7**

No data

## **Tuesday 31st August**

VERY windy all day

### **Site 1 Observer - Lisa Flaman**

- 16:09 - Julian comes out of PPS and investigates area
- 16:10 - Catches grasshopper
- 16:15 - Walks around PPS
- 16:16 - Eats grasshoppers then walks about

### **Observer - Betty Flaman**

- 16:22 - Observations at 25 ft from PPS so as to see better. Julian watches, but isn't spooked, scratches, sniffs around area of PPS. When wind picks up moves closer to PPS. Very alert. When wind dies down he ventures away with his nose to the ground, lifts head up to sniff every time he stops. Goes into PPS, comes back out again.
- 16:35 - Watching us, head bobbing up and down. Goes into PPS, wind has increased.
- 17:45 - Fed 2 chicks
- 22:48 - Jasper spotted at ranch house
- 22:49 - Fox spotted on road to tents just over the bridge
- 23:05 - Two foxes spotted at Ben's site (site 5), nothing at site 6 or 7)
- 23:37 - One fox at site 3, Julian at PPS (site 1)
- 23:37-00:15 - Julian doing usual at PPS

### **Site 2 Observer - Sam Bremner/Stephen Harrison**

- 08:00 - Scat outside tent in morning, also scat and paw prints by PPS, all chicks gone
- 09:00 - Sam to Montana Swift Fox Recovery Team Meeting, got radio-tracking equipment
- 10:00 - Stephen, Tamie and Lisa testing radio-equipment.
- 22:45 - Jasper down at ranch house, circles trucks and disappears behind us.
- 22:47 - Another fox (adult) on the main track after the bridge, moved along the track stopping to look back frequently, Lisa followed while we went up on hill try receiver
- 22:55 - Picked up signal for Inamorata to the south of ridge, signal stopped quite abruptly, she probably went down a hole. Strong signal for Epharisto from NW. Weaker signal for Indiana Jones from NE
- 23:01 - Tamie came up to say she'd seen two foxes at site 4.

### **Site 3 Observer – Tamie Hucal**

- 05:00 – Very windy, west wind, walk about to check sites and see foxes.
- 05:40 - Two foxes at Sam's site (site 2) plus Julian is at her A-frame. One fox (no RC) came right up to me, couldn't see other.
- 06:30 – Back to tent, too windy all day.
- 23:40 – Checked site for activity, 2 scats collected, fresh tonight

12:10 – Uncollared fox near Ben’s site (site 5)  
12:25 – Back to tent

**Craig Knowles (camped at site 4)**

15:50 - Begin observations  
16:20 - Fox emerges from under PPS  
16:21 - Eats grasshopper, walks around PPS  
16:25 - Beds Down in trench to burrow entrance and PPS  
16:25-16:35 - Walks around shelter, up to 20m from PPS, walks in half-erect manner. Richardsons  
Ground squirrel watches from hill 100m away.  
16:35 - Returns to shelter  
20:33 - Fox emerges from shelter, travels NE over ridge towards other PPS’s. Pauses several times  
looking back at the PPS.  
20:34 - Clears ridge  
???? - Second fox emerges from shelter, travels about PPS area (50m), pausing to smell ground  
and on 3 occasions eat insects. Defecates on tent site where grass is matted. Travels to ridge  
crest in NE. Pauses then trots back to shelter.  
20:58 - Fox emerges from PPS, walks around PPS area.  
21:01 - Travels to tent site, smells several areas including defecation site, urinates - appears to be  
male.  
21:05 - Returns to PPS  
21:17 - (Spotlighting) 1 fox next to truck, 2 other foxes in PPS  
21:27 - No foxes in area  
21:33 - One fox at 3rd shelter  
22:31 - One fox at site 6  
22:45 - One, maybe two, foxes over a the stock pond site (site 5?)  
22:55 - One fox at the gate by the fence corner: N48° 29.55  
W112° 38.40  
23:01 - One badger  
23:59 - Possible swift fox: N48° 27.84  
W112° 40.96  
00:15 - Light off  
05:15 - Light on  
06:00 - One fox N48° 28.98  
W112° 39.72  
06:15 - Light off.  
08:05 - One radio-collared fox at PPS (site 4)

**Wednesday 1st September 1999**

Weather - slightly cooler, still warm and dry

**Site 1 Observer - Lisa Flaman**

08:00 - Scat behind tent  
08:45 - Grey bird by site 5, on the ground startled as we approached

- 08:50 - Dead grasshopper outside PPS at site 4
  - 09:05 - Two small ground nesting birds by Julian's PPS, signs of digging at hole under PPS
  - 10:36 - Julian out of PPS, investigating
  - 10:39 - Scratching
  - 10:44 - Lying in sun by PPS
  - 10:46 - Hunting grasshoppers, went 5-10ft from PPS and peed
  - 10:50 - Back to PPS
  - 10:52 - Sitting by hole, listening to noise from Sam's truck, very alert
  - 10:54 - Loses interest as noise stops, and explores area instead in a 10-15 ft radius from PPS
  - 10:55 - Back at PPS, scratches.
  - 10:56 - Lies down by PPS
  - 11:00 - Tiny bird flies over PPS singing, Julian runs inside startled, then comes back out.
  - 11:04 - Julian pounces at grasshopper
  - 11:05 - Lies down again
  - 11:07-11:14 - Hunts grasshoppers, catches 3 and eats 1, then lies down again
  - 11:15 - Hunting
  - 11:19 - Lies down again
  - 11:24 - Hunting again
  - 11:26 - Runs about 20 ft from PPS, eats 2 grasshoppers
  - 11:30 - Lies down again by PPS
  - 11:35 - Drinks from water dish
  - 11:36 - Rolls in dirt by PPS
  - 11:37 - Looks for more grasshoppers
  - 11:38 - Eats insect
  - 11:38-11:42 - Eats 2 more grasshoppers
  - 11:45 - Lies down by PPS, ears forward, head down
  - 12:15 - Inside PPS
  - 12:45 - Fox running towards site 5
  - 13:22 - Golden eagle on way to wild dens site
  - 16:10 - Julian lying outside PPS
  - 18:49 - Epharisto and Georgina have their own den which they've dug close to the badlands in the valley
  - 20:00 - India found dead in small enclosure, looks as if she might have been shot with beebie gun
- Observer - Lisa Flaman**
- 22:50 - Fox around 100m from PPS
  - 22:57 - Fox between site 5 and site 6
  - 23:02 - Fox on the road spotted in headlights at the gate going into the first field to the south, followed him for a while but didn't want to scare him
  - 23:15 - Porcupine crossing bridge
  - 23:35 - Fox between Sam's tent and PPS (site 2). Another fox leaving our site (site 1) going west towards site 3.

**Site 2 Observers - Sam Bremner & Stephen Harrison**

- 08:00 - Scat round truck and on white board
- 13:30 - Up to wild den site, scat all round dens,
- 15:40 - Picked up India's signal at gate, faint, coming from the direction of site 7.  
Inamorata's signal from the direction of site 4, stronger than India's. Indiana

Jones from the same direction but fainter signal. Very faint signal from Epharisto, signal with lots of interference for Georgina.

16:00-21:00 - Sam - observations on Julian until dark, Stephen - radio-tracking with Tamie and Lisa, found India dead, and den site for Epharisto and Georgina.

### **Site 3 Observer – Tamie Hucal**

16:20 – 17:00 – Watch Julian

16:20 – Out of den box catching insects

16:26 – Drinks from silver bowl

16:30 – Eats insect

16:31 – Eats insect

16:34 – Sits on W side of den box, moves to S side, curls up on ground, occasionally scratches at collar

and grooms.

16:37 – Walks around to N side of A-frame, chewing on something, probably his collar

16:40 – Back to S side, curls up.

16:43 – Chews on collar

16:47 – Gets up and digs at dirt pile and eats something

16:48 – Chases and eats grasshopper approx 30m from A-frame

16:49 – Back to A-frame, curls up on ground

18:00 – Walk to ranch, pick up Ira's signal E of bridge

18:30 – Great Horned Owl flushed from ground

### **Thursday 2nd September 1999**

#### **Tamie Hucal**

08:00 – Walk about to collect scat. Site 4 – scat along road and around A-frame, looks like they are using

A-frame as well as a couple of ground holes. Site 3 – scat along road, at tent, and A-frame.

A-

Frame doesn't appear to be in use. Site 6 – Foxes still at new den along site, one of them is curled

up outside at dirt mound at the mouth of the den.

09:55 – Site 4, uncollared fox sniffing about, trots off towards Site 3. One RC fox at the A-frame.

10:10 – Julian out at A-frame at Site 1

Pack up and go back to Calgary

#### **Samantha Bremner & Stephen Harrison**

Weather - cold, ice on tents in the morning, stays cold, wet and windy all day.

Disturbed during night by a fox chewing on one of the guy lines of the tent, when we got up half of it had been chewed off..

Lisa, Betty and Tamie left, while Stephen and I took India into Ira's office. Wounds were puncture wounds, probably from a domestic dog as she was found near the house at the top of the access road, and she had been left without any signs of feeding.

Epharisto and Georgina's new den site - scat outside, Epharisto in den.

GPS reading: N48° 30.034

W112° 36.828.

Wild den site, fresh scat and prints around entrances to den.

17:45 - Stephen went down to flats, saw one badger.

**Observer - Sam Bremner**

18:45 - Telemetry: Inamorata in PPS at site 4. Very faint signals for Inquiry, Ira and Hedwig. This is the first time signals for these foxes have been picked up. Inquiry and Ira may be down in the flats.

One uncollared fox up on the top of the ridge, moving SE towards site 1. I followed as it moved slowly along, investigating as it went. It didn't seem bothered by my presence, looked back regularly as if to check that I was still there. I eventually lost it as it began to get too dark to see without a torch. This may have been Ingot, as he was the least easily spooked of the 4 uncollared foxes. No sign of Julian.

19:30 - Went back up on ridge, two foxes, one definitely uncollared, probably both (Stephen had telemetry equipment). One fox ran off towards site %, the other investigated the area for a while, before heading off towards site 6 where I lost it.

19:30 - 20:30 - Walk round all sites, no foxes spotted

20:30 - Julian out. I sat 100m from his PPS watching him investigating the area, whilst sitting here a radio-collared fox trotted up to about 0.5m away from me, sniffed all around me, then on east along the track and down towards Julian's PPS. Julian was inside giving warning barks. The radio-collared fox came back up to where I was sitting, sniffed round me again, and then headed off west.

21:00 - Uncollared fox moving around tent and truck, very interested in what I'm doing. Lots of coyotes howling. Very wet and windy.

**Friday 3rd September 1999**

Weather - rain, cloudy, very cold.

Back to Cochrane. Took GPS reading for site where India found as we left:

N48° 30.545

W112° 36.283

**Sunday 5th September 1999**

Arrived back around 22:00, scat all round tent area.

**Monday 6th September 1999**

Weather - dry, cool breeze, some rain in the afternoon, ground muddy in places, must have been

heavy rain over the weekend

**Observers - Sam and Stephen**

09:00-11:00 - Walked all round each of the release sites to check for signs, collected some scat from

site 4, no definite signs of Julian, although some scat around PPS.

11:30 - Walked over to big CRP area, saw three hawks, 8 horses, and probable coyote scat. On the way back we saw a truck with two people out hunting, noise of shot and deer running away.

19:00 - Telemetry over by Epharisto and Georgina's new den site, no signal for Georgina, strong directional signal for Epharisto. We followed it for approximately 40 minutes until it got too weak to follow any longer

20:30 - Drove up to wild den site, saw two foxes, heading down towards us about 100m way from the den. They were both very interested in the truck. We sat for 5-10 minutes while they circled the truck, then both headed off down the road towards the ranch house. We turned round and followed them at a distance.

20:45 - They both stopped to drink out of the big puddle at the 1st gate post. They then approached the truck again then went back to the puddle. After a few minutes they moved off SE along the fence line. One of them returned to the puddle, then walked directly towards us in the light of the headlights. It came to within around 10 metres, veered off to the right (SE), then looped back towards the fence line and headed out of sight.

\*The foxes which are from the wild den site move differently from those which have just\* been released, the 'wild' ones are more low to the ground, with their tails spread out low behind them, whereas the one's released a few days ago hold their tails high when they run

21:50 - Saw two pairs of eyes on the track leading to the tent, one was Epharisto, the other an uncollared fox.

22:24 - Saw one pair of eyes near tent, uncollared, may have been Julian as seemed quite small?

22:26 - Did a few sweeps with spotlight, no foxes spotted

**Tuesday 7th September 1999**

Weather - hot during the day, cold at night

**Observers - Sam and Stephen**

08:30-11:00 - Walk round all release sites:

Site 1 - no signs of Julian, very little fresh scat, some signs of digging underneath. No radio collared foxes in area.

Site 2 - No recent signs, no radio-signals picked up

Site 3 - No recent signs, no radio-signals picked up

Site 4 - No fresh scat, some prints around PPS, still looks in use. No radio-signals

Site 5 - No recent signs, no radio-signals

Site 6 - No recent signs, no radio-signals

Site 7 - No recent signs, no radio-signals

13:00 - Went down to the flats, no signals picked up at 1st spot that we tried. Saw 12 horses and 1 foal, plus 3 cows and 2 calves. Walked along ridge and tried again, still no signals. Went to the highest point and tried again - no signals. We walked back to the tent, trying the telemetry at intervals.

15:30 - Visit from Ira, told him about hunters we spotted yesterday. Told us to avoid them!

18:00 - Telemetry - signal from Epharisto from the south. No signals for any other foxes, may still

- be underground.
- 18:15 - Went up to the wild den site. No foxes out when arrived.
- 19:15 - One fox out, approached to around 100-150m, lay down directly opposite me.
- 19:20 - Fox startled by Stephen coming from the direction of the truck, ran off to the south.
- 19:45 - Drove around with telemetry, picked up mortality signal from Epharisto coming from the direction of the water hole. Started to search the area
- 20:30 - Found hind legs and portion of spine from a fox, then a piece of tail about a foot away. Carried on searching and found Epharisto's radio-collar around 10-15ft from the rest of the remains. Carried on searching until it got too dark to see, then went back to tent. Sounds of more shooting and people driving around so decided not to go out night-lighting.

### **Wednesday 8th September 1999**

Weather - hot, dry

#### **Observers - Sam and Stephen**

- 09:00 - Searched for more remains of Epharisto, found more pieces of fur and some blood stains as if dragged, but no more bones.
- 12:00 - Took remains into Ira's office. Checked compatibility of telemetry equipment with the bear peoples equipment for flights, and got headphones for the receiver as difficult to hear when windy

#### **Observer - Stephen Harrison**

- 19:00 - Telemetry: picked up a weak signal for Georgina at site 4. Followed it west but lost it. Back-tracked, but couldn't find it again.
- 19:20 - Went up to the top of release site hill, no signals, so went west to the top of the next hill, still no signals. Moved NW towards the river, no signals, so back-tracked SW to the ranch boundary fence. Went approximately 300 yards to the nearest high point, spotted an owl (unknown species). Tried all frequencies again, still nothing, headed towards ranch.
- 20:10 - Picked up a stronger signal for Georgina, and followed it west, then south, until approximately 400 yards SW of campsite. Lost the signal last direction was SW beyond the boundary of the ranch.
- 20:35 - Picked up signal at top of release site hill, still from the SW but a much weaker signal. Lost it again, and tried to pick it up for 20 minutes, but couldn't get it.

#### **Observer - Sam Bremner**

- 19:30 - Went up to the wild den site, and sat 100-150m away. Two foxes curled up outside the den. One looked up when I arrived, the other one didn't move.
- 19:35 - Both awake and facing my direction, but neither have moved.
- 19:40 - Both resting alert.
- 19:45 - Resting alert.
- 19:48 - Coyotes howling from the SW, no reaction from either fox, both appear to be sleeping with their heads tucked in and bodies curled up.
- 19:50 - Sun behind the mountains, harder to see the foxes as blend in too well
- 19:55 - Resting alert
- 19:56 - One fox stretching and sitting up, the other is still curled up. 1st fox scratched and stretches,  
then lies back down.
- 20:00 - Resting alert
- 20:05 - Another fox appears over the hill from the SE, trots towards the den. One of the foxes

already at the den disappears into the den, while the other one greets the new fox by touching noses and necks, both are sniffing and stretching. They both investigate area around the den.

20:10 - The 3rd fox comes back out of the den, and sniffs at the other two.

20:11 - One fox walks towards me, stops to listen to a noise from the north, and then carries on walking towards me. Investigates the area around me until only 2-3m away. Disappears behind me over the ridge towards the NW.

20:12 - Another of the foxes heads east towards the track, leaving one fox behind at the den site.

20:20 - Remaining fox gets up, stretches, eliminates, and then trots towards me, investigating as it does so. Circles me, about 1.5m away, circles round to the right heading south. I follow it as it moves over the ridge, investigating as it goes. Lose it over the other side of the ridge as runs down towards the ranch house.

### **Thursday 9th September 1999**

Weather - hot during the day, cold at night

#### **Observers - Sam Bremner and Stephen Harrison**

09:00 - Scat outside the tent containing guy line chewed off a few days before! No other recent signs at PPS at site 4.

10:00 - Went up to the wild den site, met Brian and Rowann, drove round whole area for a few hours using the telemetry. At one point we got signals on all frequencies that we tried. May have been that the ranch house nearby had a radio which caused interference.

14:00 - Once back on the Blackfeet ranch we picked up a signal for Georgina, but with a lot of interference, probably underground.

16:00 - Took down the PPS from site 1 as there had been no signs of use for a few days, and it's one of the sites visible from the road.

#### **Observer - Stephen Harrison**

19:00 - Telemetry: no signals picked up

19:15 - Found small carnivore skull, 4-5 inches in length, on the NE corner of the release site hill

19:40 - Picked up a signal for Georgina about 200 yards west of her last recorded position. Waited to see if I can see her.

20:10 - No sign of her, starting to get dark. Walked over towards the den site which was dug by Epharisto and Georgina after their release. Found a new den site near the other one.

#### **Observer - Sam Bremner**

19:05 - Wild den site: one fox out when I arrived, lying low to the ground with it's ears flat, watching me. Moved off over the ridge.

19:11 - Another fox comes out of the den and grooms itself, then curls up resting alert by the den

19:15 - Fox sleeping

19:20 - Fox resting alert

19:25 - Fox sleeping

19:30 - Fox sleeping

19:31 - Fox stands up, stretches, then lies back down.

19:35 - Fox sleeping

19:37 - Moves out of sight into den.

20:10 - Still no sign, too dark to see anymore, go down to meet Stephen

**Friday 10th September 1999**

Weather - Hot, dry for most of the day until big storm comes in

**Observer - Sam Bremner**

08:30 - Fresh digging at site 4, plus fresh prints. Checked with telemetry, no collared foxes in area

08:50 - Site 5: no recent signs

09:00 - Water Dug-out: swift fox tracks in the mud at the edge of the water, along with coyote tracks and badger tracks. GPS for Dug-out: N48° 29.927  
W112° 37.389

10:00 - Go to new den site which Stephen found last night, near the 1st den found for them. Very fresh digging and prints, no scats. No radio-collared foxes inside den. GPS reading for site:  
N48° 30.070  
W112° 36.991

11:15 - Site 6: no recent signs or radio signals

12:00 - Site 1: one fresh scat, no other signs or radio signals

14:00 - 16:00 - Drive up the access road with the telemetry, no signals picked up, looked for signs around the CRP lands.

18:00 - Huge big storm front coming in over the mountains  
Back up to Cochrane to pick up Lisa

**Sunday 12th September 1999 Samantha Bremner, Stephen Harrison, & Lisa Bremner**

20:30 - Arrived back at the camp, did night-lighting on the way into the ranch, no foxes spotted.

**Monday 13th September 1999**

Weather - hot and dry, cold at nights

**Observers - Sam, Stephen and Lisa**

09:00 - Site 4: fresh digging and prints, no fresh scat

Site 5: No prints, 1-2 day old scat

Water Dug-out: No fresh tracks in mud

Site 6: No recent signs, fresh(ish) digging at badger hole 15ft away - probably badger.

New den 2: Ground quite hard but a couple of fresh prints near the entrance, we brushed the earth so that any new prints would be visible.

New den 1: No recent signs of use, may have been used more by Epharisto than any of the other foxes, therefore won't be used.

Site 1: No recent signs outside, lifted up box to see if it can be taken away yet, doesn't look as if used recently but decide to leave it for a few more days

Site 2: No recent signs.

Site 3: No recent signs.

14:00 - Lisa and I into Cutbank

14:55 - Swift fox runs across the road in front of the truck on the road after turning off the gravel road. Goes into a drainage tunnel at the side of the road. Didn't look like it was collared.

19:40 - Go up to the wild den site, no foxes were out. Waited until dark.

- 20:40 - Spotlighting: One uncollared fox spotted through the tall gates on the road leading to the farmhouse in the coulee. GPS reading N48° 28.681  
W112° 39.610.  
Fox moved across the track towards highway 89 (south).
- 21:45 - One fox spotted on the secondary road (358) off the 89. Not collared, picked up a signal for Georgina at the same time, faint signal, lost it after about 20 seconds. Drove on secondary towards Cutbank, same route Lisa and I took that afternoon.
- 22:20 - Six foxes all grouped together in a field on the right-hand side of track, just after the last cattle grid. None of them were radio-collared. GPS reading: N48° 31.832  
W112° 25.097
- 22:30 - Three more foxes approximately 3/4 of a mile on from the last one, again on the rhs of the road. GPS reading: N48° 31.838  
W112° 24.207.
- 22:45 - Fox ran across the road again in the same area as this afternoon, and looked like it went into the same drainage hole. GPS reading: N48° 34.147  
W112° 21.538
- 00:00 - One uncollared fox spotted at the right of Dale and Debbie Fenner's house just before the access road on the 358. GPS reading N48° 31.622  
W112° 33.591
- 00:15 - Two foxes on the rhs of the access road (going towards the ranch), both uncollared. Looked quite small, possibly cubs? GPS reading: N48° 30.954  
W112° 35.186
- 00:35 - Porcupine on left hand side of the road.  
\*\*Lots of harvesting going on in these areas, so a good food supply in the fields\*\*

**Tuesday 14th September 1999 Samantha Bremner, Stephen Harrison, Lisa Bremner & Tamie**

**Hucal**

Weather- hot, dry.

**Observers - Sam, Stephen, Lisa, and Tamie.**

- 09:00-13:00 - Check out area where last 2 foxes were seen to see if there are any signs of dens. Find a hawk carcass, no obvious sign of death, very dried out. Scattered feathers and coyote scats around the area. GPS reading: N48° 31.123  
W112° 35.087

Found area with fresh digging, but looked more like badger than fox. The fox we saw going down a hole last night was probably using an empty den to hide in, rather than an actual den. Most likely passing through the area. We walked all along this area looking for signs of foxes, didn't find any but looked like really good habitat for them.

- 15:00 - Checked den which we brushed yesterday - no new prints.

**Observers - Sam, Brian, and Rowann**

- 18:00 - Wild den site: one fox comes over the ridge towards us. Works it's way round to the SW and disappears.

**Observers - Sam, Stephen, Lisa, Tamie, Brian and Rowann**

21:30 - Strong directional signal for Georgina from the south.

22:22 - Nightlighting: Strong telemetry signal for Georgina off the rhs of the track (road leading from the 89), fading rapidly then disappeared. GPS reading: N48° 27:663  
W112° 41.407

23:14 - Four foxes on the rhs of the access road heading away from the ranch. None of them were collared. Found in the CRP land approximately 100m from the track, beyond the fence on the edge of the ridge. GPS reading: N48° 30.713  
W112° 35.735

23:20 - One pair of eyes seen further along the same ridge

**Wednesday 15th September 1999**

Weather - Hot, dry

**Observers - Sam, Stephen, Lisa, and Tamie.**

22:01 - Nightlighting/Telemetry: four whitetailed deer on left-hand side of track from Cutbank just after last cattle grid.

22:06 - One fox spotted on the left-hand side of the track approximately 0.5 miles from the deer sighting, just after the farm. GPS reading N48° 31.935  
W112° 26.334

22:10 - Possible single swift fox sighting on the right-hand side of road (358) one mile on. Not definite sighting. GPS reading: N48° 31.829  
W112° 26.661

22:20 - Coyote spotted on left-hand side of road (358). GPS reading: N48° 31.859  
W112° 27.662

22:24 - Coyote on left-hand side of road (358). GPS reading: N48° 31.798  
W112° 28.126

**Thursday 17<sup>th</sup> September Tamie Hucal**

Arrived back at campsite, talked to Dale and Patty at house opposite ranch access road

Weather – calm, clear evening

19:59 – great horned owl perched at barn

21:27 – 21:31 watched a badger digging behind Dale and Patty’s house N48° 32.449  
W112° 33.240

21:46 – 21:51 – Uncollared swift fox N48° 32.039  
W112° 33.857

22:00 – Uncollared swift fox S of access road N48° 31.495  
W112° 34.191

22:33 – Picked up Inamorata’s signal near Hagan Flat coming up from SW (Badger Creek area)

12:20 – Badger N48° 30.555  
W112° 34.325

01:06 – Badger at my tent

**Friday 17<sup>th</sup> September Tamie Hucal**

Trek south of ranch, talked to Vern about project and asked permission to go on land. Very friendly and helpful.

13:00 – Picked up Inamorata’s signal south on road at cattle grid behind Vern and Lou’s ranch

13:45 – Found Inamorata at opening to den N48° 27.202

W112° 33.518

21:45 – Pick up Georgina’s signal, again near 3 horses (?), but lost it and couldn’t find her.

## **Conclusion**

The foxes were monitored from the 28th of August to the 17th of September. During this period, a number of signs indicating that the foxes were making attempts to establish themselves were found, such as areas of new digging, or digging at existing sites. Radio-tracking showed that foxes were surviving, and remaining in the release site, over the immediate period following release, the time period which can prove most crucial to the foxes as they are under the most threat at this time due to lack of knowledge of the local area. After a few days it appeared that the foxes were travelling greater distances and exploring more of the surrounding area, thus familiarising themselves with sites providing essentials such as cover from predators or good food sources .

During this three week monitoring period two of the 15 foxes were found dead, one on the 1st of September, three days after release, and the other on the 7th of September, nine days after release. These foxes were both killed by natural predators, and were found by tracking the mortality signal emitting from their collars. This demonstrates the advantage of the radio-collars in removing the 'unknown' factor of foxes which have not been sighted for a period of time. Too often it is the tendency of follow-up surveys to classify 'unknown' animals as not having survived, when this has not actually been confirmed. Therefore I would recommend that if possible, all released animals should be collared for a minimum period of two years following release, as this would provide a clearer indication of the number of foxes which are surviving.

Nightlighting during this three-week period produced a higher number of uncollared foxes than previously spotted, these were mainly situated in fields which were being harvested, thus producing a good food source for the foxes. Due to the high number of sightings, and the groupings of these foxes, it is possible that they were family groups which had survived the previous years release, and produced young. The newly harvested fields would be an excellent food source for swift fox, containing many small mammal and insect species. Unconfirmed sightings from local people also indicated that this area was frequently used by swift fox during this period.

From the findings of the follow-up survey conducted in June, and the monitoring period following this years release, it appears that the foxes are surviving and establishing themselves in both the release site, and the surrounding areas. Local people seem to view the fox re-introductions favourably, and are willing to help by reporting sightings, and not harrassing foxes on their land. Therefore, it appears that with the continued input of numbers into the area, the swift fox should be capable establishing itself, and becoming a sustainable population.