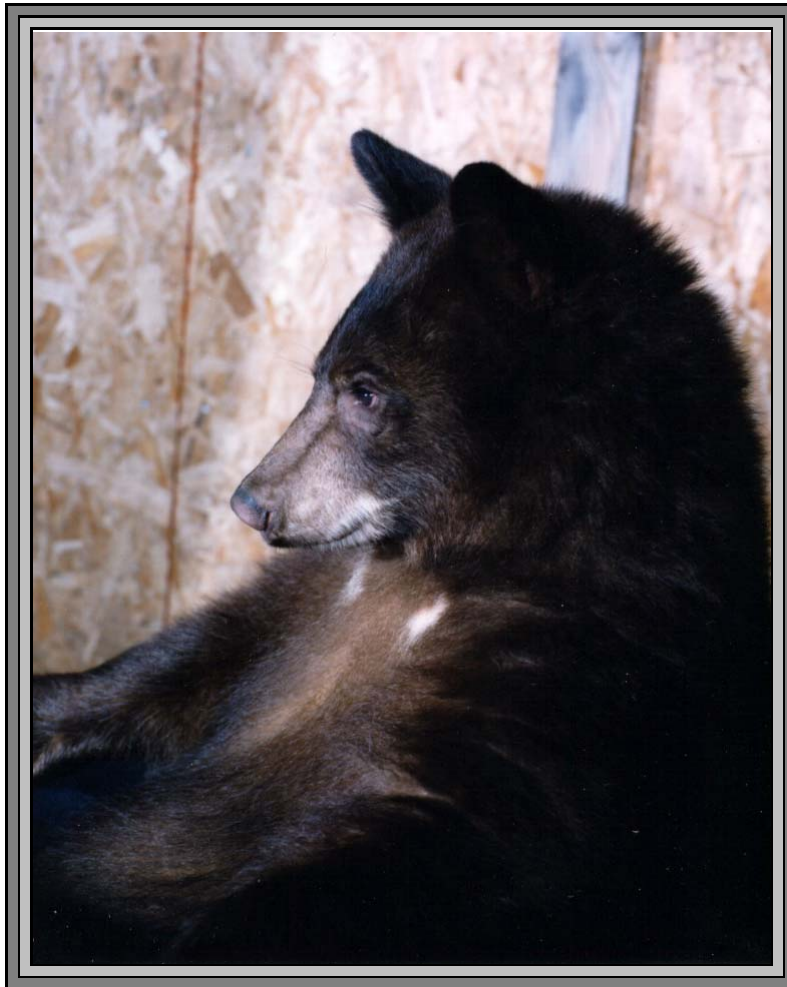


**IDAHO BLACK BEAR REHAB, INC.**



**Garden City, IDAHO  
U.S.A.**

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January , 2005

## ACKNOWLEDGMENTS

I started as a wildlife rehabilitator in 1978. When I began the Idaho Black Bear Rehabilitation Program in 1989, working with orphaned cubs quickly became my focus for the future as a rehabilitator. The bears teach me what it means to be a bear and each year they bring new insight and knowledge. I also continue to learn from the books, documentaries, studies, and conference papers of those working with bears in their natural habitat. By sharing their knowledge, they help ensure the success of this program.

Credit goes to John Beecham, one of this country's top black bear experts, (formerly Game & Research Manager for the Idaho Dept. of Fish & Game) and Idaho Fish & Game Regional Wildlife Manager, Jeff Rohlman for helping make the orphaned cub rehab program a success. John's unlimited patience in answering a myriad of questions (some which probably kept him chuckling for days) got me through the difficult times. His support, knowledge, and encouragement were invaluable. Jeff spent hours searching the mountains for the available den sites each winter. His follow-up after denning or releasing the cubs is an important contribution to the program. In most cases, a wildlife rehabilitator is solely responsible for the release of the wildlife in his or her care. It was not easy to relinquish part of that responsibility. Each winter I place the cubs that have been in my care the past eight months in their capable hands. John Beecham and Jeff Rohlman quickly earned my trust and respect. I appreciate their efforts in managing the logistics of denning the cubs and their concern for the welfare of the bears. Thanks to them, the cubs experience the perfect release each time.



Jeff Rohlman & John Beecham

My gratitude to Dr. C. Leon Johnson and later Dr. Robert Carlson and all the staff at Northwest Animal Hospital who started with us and remained with us over the years. To Dr. Tim Murphy and the staff at Animals R' US, thank you for stepping in after Dr. Johnson & Dr. Carlson retired. A big thanks to Valerie LeBoeuf and Toni Bastida Hicks who served as bear sitters. Recognition also goes to the many officers and hard working people at Idaho Fish and Game and state wildlife agencies in Utah, Oregon, Washington, Wyoming, and California. Their help rescuing these cubs gave me the chance to develop this program and to continue learning and sharing the knowledge today. To all the state agencies that bring orphaned cubs to us, I'm grateful for your willingness to save and help the cubs.



Victor Watkins (WSPA)

This program would have ended in 1998 without the financial support of the World Society for the Protection of Animals (WSPA). My respect and appreciation definitely goes to Victor Watkins, Liberty Wildlife Manager and everyone at WSPA for their support and encouragement to continue the work of the IBBR program.

December, 2004

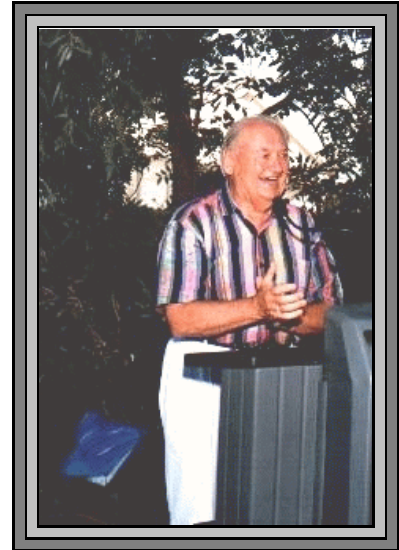
## Acknowledgments - continued



Tom Robb

A personal thanks to Steve Audain who keeps me focused during the turmoil. Special thanks to Tom and Kathy Robb who went beyond being good friends and neighbors. Tom is the only other person allowed to care for the bears - if not for both of them, I'm not sure I'd make it through the years. Certainly, a big thanks to all the neighbors whose support is never-ending. Managing the bear program would have been impossible without the support of Evelyn Loveless, Kevin Loveless, Cindi Michalski & the staff and management of Global Travel by enabling me to work from home. They made it possible to manage the demands of my job while taking care of my mother, the bears, and the bear program. Thanks to my parents who shared their property, money, love of wildlife, and worked side by side with me to make it all happen.

Mayor Ellis, the Garden City Council, and all the wonderful people at Garden City Hall and the Garden City Police Department have been very kind and supportive to the Idaho Black Bear Rehab program. Their help and support over the years is very much appreciated. They make us feel a welcome part of Garden



Mayor Ted Ellis



David Soul with Tas

City and IBBR is proud to be part of the Garden City family.

To David Soul, thank you for sharing your gift of music during the thousands of hours spent watching the bears. Not only did you keep me going, you made those hours an even greater treasure. Your continued support, help, and friendship encourages me during even in the most difficult times. Finally, my

deepest gratitude and respect to a man who, by example showed me qualities that have value and worth, qualities that result in success and achievement. He knows who he is. Out of respect for his privacy, I'll leave it at that.

Most of all, thanks to the bears and their wonderful spirit. What they gave me is beyond anything I've done for them. I'm so grateful to the many people dedicating their time and knowledge to ensure there will always be a place for bears. Can you imagine a world without them? British naturalist William Beebe said, "When the last individual of a race of living things breathes no more, another heaven and another earth must pass until such a one can be seen again."

*Sally Maughan*

December, 2004



# INTRODUCTION

Since 1989 Fish and Game departments in Idaho and surrounding states placed their orphaned black bear cubs in the rehab program. They ranged in age from 3 weeks to just over 1 year. They arrived from January through December. Before release, six cubs died of illness or injuries. With spring arrivals, we release the cubs by placing them in dens in the mountains during hibernation. Fall arrivals usually require holding until May and doing a spring release. As of December 2004 only three of the over eighty bears released from the program became problem bears.

We consider the rest successful releases, even those shot during hunting seasons in later years. Once released, rehab cubs must face the same difficulties and challenges that all bears face. Hunting season, fires, droughts, starvation, habitat loss, cars, other bears, and poaching all pose threats to a bear's survival whether a rehab cub or not. Generally, rehab cubs avoid people, don't become problem bears and will take their place in the population as expected.

There are a variety of opinions on the success of rehab with cubs. Some individuals don't believe in wildlife rehab for any species. Some expect that any rehab cub will always become nuisance bear or starve to death. For those willing to try rehab, finding a rehabilitator with facilities and experience to handle cubs until release can be difficult. Just some of the reasons for placing orphaned cubs in a rehab program are:

1) Wildlife rehabilitators focus on the individual. Wildlife managers and biologists focus on populations. That makes us a perfect team. We all recognize that saving a few cubs will not affect the population. However, a rehab program will provide us with the knowledge to make a difference when it counts. When you have a low bear population or a threatened or endangered population every individual makes a difference. Others can adapt what we learn each year to place cubs back in their populations. To start learning when the population is already low or threatened puts us at a disadvantage.

2) Imprinting is always a concern in wildlife rehab, both with some species and some individuals. However, adult bears are not social animals like some species. They live a solitary life and that makes them an ideal candidate for rehab. During the rehab process, they are social with other cubs as they would be with their own siblings in the wild. Playing and wrestling together helps them develop skills needed later on. Except for the time they spend together as cubs they don't need or depend on the socializing that can create problems for some wild animals in rehab. Even siblings released together may not stay together very long.

3) The public doesn't know or care that the individual won't make a difference. They aren't aware of the logistics of caring for and placing the cubs back into the population. However, the negative publicity from euthanizing an orphaned cub can quickly and easily create the picture of an uncaring and unfeeling wildlife department. On the other hand, the favorable publicity from the rescue and rehab of a cub generates good will and public support for all concerned. There aren't that many orphaned cubs found and it's not as though there are huge numbers each year. We need to incorporate bear rehab into our state wildlife management plans. It's also important to educate the public on the financial and practical requirements of raising and releasing orphaned cubs so they contribute to the process.

4) The goal is a successful release. For a wildlife manager or biologist that means a bear that survives and does not become a nuisance. For a wildlife rehabilitator that means an animal in good health, wild instincts developing normally, and one who can survive on it's own. As a wildlife rehabilitator since 1978 and having worked with cubs since 1989, I believe that goal is attainable with most orphaned cubs. What we learned in the past and continue to learn will help others develop a successful rehab program for orphaned bear cubs. Educating the public on living with bears can also contribute to a successful rehab program.



December, 2004

## STATISTICS ON REHABILITATED CUBS

Rehab period: 1989 - 2004  
Bears received to 12/31/04: 124  
Age on arrival: 3 weeks to 13 months  
Bears pending 2005 release: 37  
3 Washington  
1 Wyoming  
1 Oregon  
13 Utah  
19 Idaho

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Bears received as of 12/31/03: 87

Sex: 43 male - 44 female

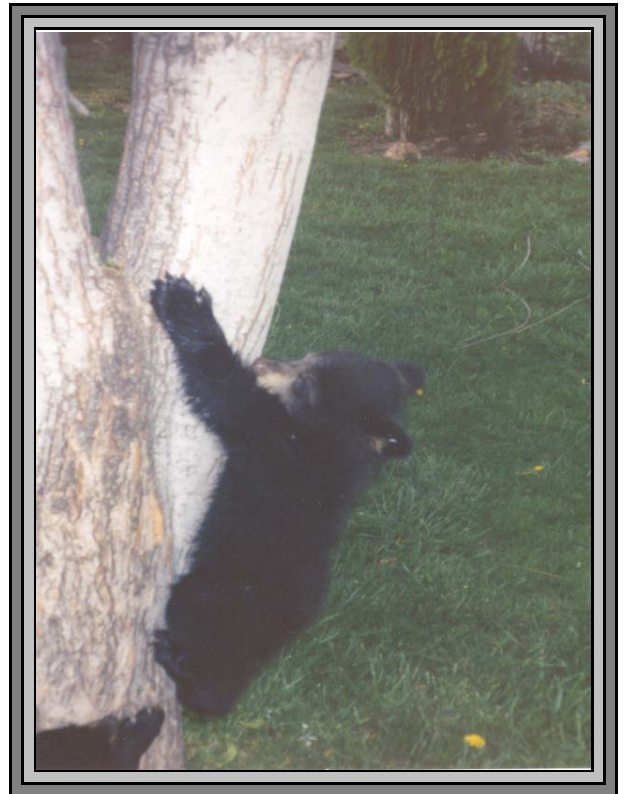
Reason orphaned: 14 during spring hunt  
6 from poaching  
6 when female killed by car  
61 fall hunt, fires, abandoned,  
reason unknown, hit by car  
or injuries from unknown  
causes

Disposition: 81 bears released - 42 female - 39 male  
6 bears died prior to release  
1 female - broken neck in a fall  
1 female & 1 male - suspected tetanus  
2 males - pneumonia  
1 male - injuries sustained when hit by a car - euthanized

Release period: Winter dennings: November 18 - January 1  
Spring releases: May 17 - June 10

Release weights: 60 lbs - 173 lbs

Release results: 76 successful releases including a male relocated once without further incident. We have trapped several of the bears still out there during population studies in later years. We also know the following results:  
13 bears shot during hunting seasons in years following release  
1 bear killed by another bear  
1 bear hit by a car  
2 bears died during a mishap in an out of state denning  
3 problem bears - 1 female placed in a nutrition study program - 1 male shot by a homeowner while trying to catch rabbits (no opportunity to relocate and had not been getting into garbage) - 1 male euthanized after being relocated & returning to the same populated area



December, 2004

# FACILITIES AND THEIR USE

## Period of use: 1989 to present

### Description:

6' high x 14' wide x 27' long enclosure  
chain link  
one side solid wood wall  
Chain link divider with door so enclosure can be sectioned in two

### Purpose:

Used when needed as a temporary interim facility before placing cubs in the main enclosure. This enclosure now houses 2 adult coyotes that foster orphaned pups. We seldom use it for the bears now. However, we can section off half the enclosure for a period of 4 - 5 days if necessary.

## Period of use: 1994 to present

### Description:

6' high x 8' wide x 24' long enclosure  
Chain link  
Insulated den  
Water tub  
Logs for climbing  
One entrance - double entryway  
Chain link roof with solid roof above chain link  
Dirt floor - chain link buried 2' deep and 3' inside

### Purpose:

This is an enclosure that replaces two others we dismantled during remodeling. Cubs will stay in this enclosure until we are ready to move them to the main enclosure. A chain link divider about 7' from the back lets us section off the youngest cubs until they learn to climb and fall without hurting themselves. We usually only use this small section when the young cubs are first placed outside or are unsupervised.



January , 2005



## FACILITIES AND THEIR USE - continued

### Period of use: 1990 to present - winter enclosure:

#### Description:

8' high x 35' wide x 45' long  
Chain link  
Two entrances - 1 single & 1 double entryway  
Main entrance 6 ½' wide x 8' high chain link door with a double entry  
Second chain link door on opposite side of enclosure  
Chain link roof - wood & metal roof above chain link - covers the whole enclosure  
Dirt floor - chain link buried 1' deep and 3' inside  
160 gallon swim tub  
Large logs for climbing - log gym built in center  
7' long hollow log structure - 2 1/2' diameter made from 2 x 4  
2' high x 1 ½' wide x 4 ½' long permanent dry dog feeder made out of 2 x 4  
Several wood and plastic dog houses for dens - the hollow log and swim tub both serve as dens during hibernation  
Removable chain link divider panel to section off portions of enclosure

### Period of use: 2000 to present - deck enclosure:

#### Description:

3 ½' high x 4' wide x 5' long  
wood frame - 2" x 2" welded wire  
1 entrance opening from bottom to top & 2 separate small window doors opening on top  
Wood floor covered with hay  
1 ½' circular metal water tub  
Vari-kennel with hay  
One tree branch and two log stumps for climbing and playing

Young cubs are kept in a large vari-kennel inside at night until about eight weeks old. During the day they spend their time in the small enclosure mentioned above on a covered deck area outside. This allows them to adjust to being out of the presence of their foster mom for short periods of time. If they become frightened or bawl for help, Sally can be there in seconds. It only takes a day or two for them to feel secure and safe by themselves as long as they know Sally is close by & responds when they bawl. Dictated by their needs and amount of activity, we then transfer them to one of the three cub enclosures where they have plenty of room. They learn to climb and fall without hurting themselves in these enclosures. Each day they become more adept at climbing and falling on their own. During 1999 we also completed two additional cub enclosures. These new enclosures can be used either for young cubs, older cubs that are sick or need to be isolated, and for cubs ready to start hibernation.



January , 2005

## FACILITIES AND THEIR USE - continued

We use the winter enclosure for two purposes. The primary use is for cubs arriving in fall that do not have enough weight to go into hibernation. They must continue to eat while other cubs in the main enclosure will be preparing for hibernation and eventually stop eating. Since we cannot feed selectively in the same enclosure, we keep all underweight fall arrivals in the winter enclosure. It is well protected from the elements, allows the cubs to be as active as they wish and if so inclined can start a late hibernation in February.

Our winter enclosure is also used as the last step before moving cubs to the main enclosure. The cubs graduate from one enclosure to a larger one as their needs dictate. Timing of the move depends on the individual bears, their age, and their development. The openness and size of the larger enclosure can frighten the cubs. The chance of injury from falling off the 8' wire increases if the cubs panic. For a day or two, Sally will stay with the cubs for long periods during this introductory time. Once they feel secure in their new surroundings, they stay in this enclosure until June when we move them into the main enclosure. They will remain in main enclosure until their release. We also use this enclosure to house cubs arriving in fall. They will need additional feeding time after the others have started hibernation. In March we will move the fall cubs from the winter enclosure to the main enclosure. They will stay in the main enclosure until their release in late May or early June.

### Main enclosure - completed spring, 2000

#### Description:

10' high x 40' wide x 100' long enclosure

Chain link

Two entrances

Main entrance 12' wide x 10' high chain link sliding door

Chain link door behind storage area leads into feeding area which can also be sectioned off from the main area

Second entryway goes directly into back part of the main enclosure - also has a double entryway

Chain link roof over entire enclosure - reinforced seams with chain link overlap & metal poles woven through both sections of chain link

14' wide x 28' long wood roof covering the den area

Dirt floor - chain link buried 3' inside

160 gallon swim tub

Large tree trunks cemented in the ground for climbing

Smaller tree trunks & logs positioned for climbing & playing

7' long hollow log structure - 2 ½' diameter made from 2 x 4 (used as needed in two enclosures)

3' high x 3' wide x 5' long permanent dog feeder - holds 100 lbs of dog food that is dispensed on front & back side

Culvert pipe sectioned into 3 dens buried in ground

4' x 4' wood den buried partially in ground with a 3' long entrance area

Hollow log also serves as a dens during hibernation

2 storage sheds sit in front of the main double entryway - has 2 of the 5 freezers, 4 refrigerators, and dog food storage container that holds 50 bags of dog food

Sprinkler system covers inside enclosure & trees & shrubs surrounding the enclosure

40' shade netting on west side & covering roof over the den areas to provide protection from sun along with trees & shrubs on 3 sides - put on in April & taken off in November

Three one-way mirrors positioned along east side for visual use during school education programs

The 2 storage sheds are connected to the enclosure through another chain link area so we can isolate each of the cubs to weigh them or provide individual medical treatment

Plenty of vegetation and grasses for the bears to eat

The main enclosure will allow us to rehab more cubs and separate spring and fall arrivals.



3 One way mirrors to observe bears

## FACILITIES AND THEIR USE - continued



In the spring of 2001, we built a wooden deck area over the dens. The bears used the back den area so much even the strong pasture grass would obviously never recover. We were left with mud and a big mess. The bears would carry much of the mud into the dens with them. On top of the deck area, we added a wood roof so the bears could use the deck too if they wanted to stay out of the weather. The deck area really solved the problem of the mud since the dirt stayed dry, the bears stayed dry and did not carry the mud into the dens. What surprised us was how much they loved the roof. Although only a foot below the chain link roof, the bears easily climbed on top of the roof. Being high up, it is frequently their favorite spot. They were very creative in

figuring out ways to get on top. Like a firefighter, the cubs also learn to shinny down the poles when they want to come down. They play and sleep on the deck area during the day, use the roof if startled and the dens at night.

In 2002, we made some modifications to the roof area. Some chain link seams were separating slightly with the weight of the bears if they climbed up and pulled on the chain link covering the roof. A couple of the bears were athletic enough to walk upside down on the chain link roof. Hog rings used were not as strong as they should have been. We replaced all the hog rings along the seams with the strongest gauge we could find. Also, some seams did not overlap as much as they should. Rather than redo the whole roof, we stretched a 3' wide strip of chain link the across the length of each 100' long seam. We wove round metal poles through both the upper and lower chain link sections. By reinforcing both sides of the seams, it is unlikely the bears could separate the seams.



Before reinforcing the chain link roof



On the roof again

December, 2004



## FACILITIES AND THEIR USE - continued

The bears began to make their own doorways to the wood roof. As expected, bears can rip apart even the most hardy structure. We built the upper roof and deck flooring with wafer board. We expected it would last about two years depending on how much the bears worked on it. In June 2003 all but a two-foot area of the wood roof was gone. We completely rebuilt the roof. This time we left them two sections to act as open windows to the roof. We'll see if this does anything to deter their destructive tendency. They have left the lower floor above the dens alone except for one small area just large enough to squeeze through. It's a favorite spot for bears to play - one on the top and one underneath by the dens.

In 2002 we refined the water setup to the swim tub. We have water running into the swim tub from the roof and draining out into the nearby ditch at the same flow rate. Despite the huge log stumps surrounding the swim tub, the bears drag a lot of dirt and debris in the water with them. It frequently clogged up if we closed the valve. In the fall of 2002 when the well pump gave out after 20 years, we also upgraded the pump and a device that allows us to run water 24 hours a day without damaging the pump. That kept the water clean and meant the bears had fresh drinking water all the time. In 2003 we winterized part of the current water system to the enclosure so we have access to water for any bears we might have in the enclosure during winter. We also made some additional repairs to the drain system and upgraded the valves from plastic (which broke constantly) to metal.

The 2002 bears were an especially destructive group and constantly pulled or pushed the heavy plastic swim tub inward. This created a wonderful waterfall effect which promptly flooded the whole enclosure. We put a very temporary fix on that until the bears were released, but during their antics they cracked the swim tub in one or two places. Not only did we replace the whole swim tub, we had to replace the plumbing and rebuild the stand the tub rested on under the logs. We hauled in dirt to cover the dens again, planted new pasture grass, and replaced several of the metal rods strengthening the chain link roof. It's amazing how the cubs manipulated those rods free enough to bend them on the ends!



Out of the swim tub soaked with water, race to the deck, climb up the logs, and run across the roof. Typical behavior on hot days.

December, 2004

## MAIN ENCLOSURE PICTURES

Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



Figure 6



December, 2004



MAIN ENCLOSURE PICTURES - continued

Figure 7



Figure 8



Figure 9



Figure 10



Figure 11



Figure 12



December, 2004

## Main Enclosure Pictures - continued

### Figure 1

Looking to the West - dens buried beneath wooden structure on right - black screening on roof lowers temperature in enclosure since it's in full sun most of the day - plenty of vegetation to eat & logs to climb

### Figure 2

Separate front section of enclosure on East - large chain link gate closes between this section of the enclosure & the back section - front section used mostly for separating cubs to treat or capture - dog food holder in corner holds about 100 pounds of dog food - plastic dog kennel used in front section only when new cub arrives & is in process of merging with others - three one way mirrors visible on wooden fence on East side of enclosure - picture taken from main entry into enclosure

### Figure 3

Deck area in back - dens are buried underneath the lower floor - bears spend a lot of time playing on the lower floor and around the dens - hole in lower floor allows access to den area - can also board up part of the lower floor area & create even more dens for hibernation if needed

### Figure 4

Looking East to West from front section of enclosure - swim tub was buried lower in ground & surrounded by stumps - bears destroyed old swim tub & the new tub sits higher - eventually we'll have it surrounded by stumps again - PVC pipe comes across chain link on top & to center of swim tub - water flows into tub at same rate as it flows out lower PVC pipe at base of tub - PVC pipe near top of tub is to prevent any overflow - constant stream of water provides fresh drinking water until tub has time to recycle the dirty water if cubs playing in the tub - also on top running parallel with the side panels East to West is a PVC pipe sprinkler system that waters the interior of the enclosure

### Figure 5

Looking North to South - large mound on left is den buried in the ground

### Figure 6

Looking Northeast to Southwest from front of enclosure

### Figure 7

Looking from front of enclosure across center to Southwest corner - most of the logs are buried in cement in the ground so bears can't move them - some they dig up and we have to redo the following year

### Figure 8

Looking West - taken from gate that separates the front section from the back section

### Figure 9

Looking East to one way mirrors used for education programs - entry to enclosure just to right of picture

### Figure 10

Sliding gate that separates the enclosure is just behind the chain link panel on the left of the picture - front section is only about 28 feet across as two storage sheds sit parallel to the front of the enclosure shown in this picture

### Figure 11

Looking across the center of the enclosure South to North - fencing (wood & barbed wire) separate us from the housing developments on both sides - neighbors don't spend any time in back yards so "bear watching" hasn't been a problem

### Figure 12

Looking to back section - sliding gate to close off front section visible in this picture - water pump for swim tub just to right of gate outside enclosure - during winter a small water tub sits in the corner to the right of gate area & is used for daily water as swim tub is drained for winter

## USE OF THE MAIN ENCLOSURE

Due to the large size of the enclosure, we found that adding bears throughout the year presented new problems. In the smaller enclosure, bears merged within a few days. With more room it was often up to two weeks or more before they really merged as a group. In the smaller enclosure the cubs frequently ran into each other and soon learned that no one wanted to fight. Within days they were all eating, sleeping, and playing together. In the large enclosure they had room to avoid each other and did so. The cubs now had to make a point of greeting the other bears and it took much longer for that to happen. The situation also presented a problem with providing food and shelter until everyone merged. New arrivals tend to stay in the front section where there is food and refuse to go in the back area where there is shelter. Cubs in the back



refused to come to the front section where there was food. As a temporary solution we added plastic dog houses filled with hay for shelter in the front and fed in both the front and back areas. The swim tub and running water for drinking sat in the middle of the enclosure and both groups used it.

Without exception, every bush or weed that stood more than a foot high was taken down. We have a plant similar to large sunflowers that grows 10-12 feet high. This plant covered all the den areas before we built the deck and looked like a mini forest. The first day we put cubs in one of them (not to name names, but it was Tas), pushed and pulled every single plant down. It looked like the forests after Mt. St.

Helen's erupted. The berry bushes never stood a chance. The pasture grass held firm, but took a beating, even with the sprinkler system frequently watering it. When the bears in the main enclosure were moved to dens in the mountains, we moved the others from the hibernation enclosure into this one. As yearlings they put a lot of pressure on the enclosure. Every area was used, large patches of grass eaten down or trampled & died in a few areas. They punctured holes in the swim tub, caused the wire roof to sag a bit, tore up every log and tree in the enclosure except those buried in cement. It was an eye-opener to see the abuse the enclosure took with these yearlings, compared to the cubs dened in Dec. However, the structure itself proved strong. We had major interior repairs and many smaller repairs, but as for the structure itself, we only replaced a rod here and there in the chain roof.

We contacted Teufel Nursery (503-646-1111) in Portland, Oregon and ordered some sections of a sun screen material. It's a black netting material which allowed the light through, but kept the rays of the sun out and the temperature down by ten degrees at least. We take it down every November as the weight of the snow would be a problem. Until the deck area was built, we put a large tarp on the roof over the dens to keep the mud down in that area. Since the enclosure is in full sun from about noon until dark, we'll continue to put the screening material up each spring and take it off in November. The bears never bothered it at all until the rambunctious group from 2002. During the spring of 2003 after they came out of hibernation they began pulling it through the chain link and chewing a hole here and there.

December, 2004



## USE OF THE MAIN ENCLOSURE - continued

By the time we release any yearlings held through winter, the spring cubs are about ready to move into the main enclosure. It's a bit overwhelming for them at first, but they gain courage from each other and within the day they have investigated every corner. For a lone cub it is intimidating and that cub tends to find the dens & stay there. It takes a week for a lone cub to check out the whole enclosure. Obviously a concern is that the cubs will find any weak areas and work on them. Interestingly enough, they do thoroughly check out every nook and cranny when they first enter the enclosure. However, once satisfied, they never bother to look again. Should a weak spot turn up later, they only seem find it accidentally.

Although we keep the dog food holder at the front of the enclosure full at all times, we scatter fruit and acorns around the enclosure for the bears to find. Honey spread on one of the logs is a favorite find. The bears use all parts of the enclosure until they start becoming lethargic in fall. At that point they aren't very active and remain in the den area most of the time. Even though the spring cubs are now 60-80 pounds and quite large, we can put more cubs in the enclosure when orphans start to arrive in fall. Since the bears are using very little of the enclosure by this time they aren't crowded. It's just a matter of more scat to pick up each day.



IBBR hopes to install cameras in the future to monitor the bears during the rehab process. We tested the locations of the cameras by using a plastic milk jug. If any bear could get to the cameras it would be the infamous, very athletic and agile, Tas. She tried, but wasn't successful and eventually stopped paying any attention to the jug. However, her future cousin, Makana (also from Utah) did manage to get the milk jug down during December, 2002. We're still puzzling over how she did it so it may be back to the drawing board as to how we place the cameras. Eventually, with the monitors in place we will be able to watch their behavior throughout the day without being observed ourselves. At some point, we also hope to add live video feed on our web site ([www.bearrehab.org](http://www.bearrehab.org)). This will provide other bear projects around the world, rehabilitators, schools, biologists, and state wildlife agencies the opportunity to observe the same behavior we do during the rehab process. It will be an especially useful tool for bear projects that have threatened or endangered populations and need to save every orphaned cub. They will be able to observe the behavior and various stages of development while comparing it with what they see in their own cubs.

December, 2004

# FORMULA

We fed our first cub a formula of Esbilac, mixed three parts water with one part powder. We added Karo Syrup, honey or Gerbers #3 jars of strained fruit baby cereal for flavor. Although the cub did very well on the formula, feeding it was expensive. Even the largest size of powdered Esbilac was impractical for the amount we needed.

After denning the first cub, we began looking for ways to extend the formula without cutting the nutritional value. We contacted Pet Ag (Borden), the company who makes Esbilac. Their veterinarian recommended a combination of Esbilac and Multi-Milk. The formula we put together was one the cubs liked and provided all the nutrition we needed for them. We sent the information to IBBR's veterinarian, Dr. C. Leon Johnson plus Charlie Robbins at Washington State University in Pullman, Washington. Both had nothing but positive comments so we switched to the new formula.

We have used this formula since 1991 with excellent results. The cubs' growth and development improved as did the condition of their coats. Another advantage was cutting down the frequency of the feedings. Pet Ag recommended mixing the formula as follows:

75% Multi-Milk powder  
25% Esbilac powder  
Mix one part powder with one part water

The bears did not like the thicker consistency of the one to one mixture. Rather than struggle to get them to take the formula, we changed it to one part powder and two parts water. We blend and refrigerate enough formula for twenty-four hours. Using very hot water in the blender mixes the formula better. The cubs do not seem to like freshly made formula. They definitely prefer the refrigerated formula heated for each feeding. We also learned some bears prefer lukewarm formula, others much hotter. Sometimes we add Karo syrup or honey. However, the bears' preference is always a blend of fresh fruit or Gerbers number 3 jar of strained fruit baby cereal. We also add Gerbers rice cereal (flakes) if needed. It helps firm up the stools when first starting the formula. We continue using it while on formula as it helps extend the formula and helps give it the consistency the bears like. After the cubs are about four months old, we add some yogurt. We also added a fine grinding of puppy chow to get them used to the taste in hopes of making the transition to dog food easier. It did not seem to make much difference and we stopped doing that.

## Formula ingredients:

25% Esbilac  
75% Multi-Milk (also called Milk Matrix 30 / 55)  
Mix powders together then add one part mixed powder with two parts water  
Add 1 jar of #3 Gerbers strained fruit baby cereal per 2 cups of liquid (or 1 jar per 3 cups as the bears get closer to weaning - you might also have to add a bit more when first introducing the formula  
1-2 tablespoons Gerbers baby rice cereal (dry) per 2-3 cups of liquid  
Vionate as directed based on weight



January , 2005



## FORMULA - continued

We usually mix the powders together in a large batch so we do not have to mix them each time. In previous years the consistency was more powder and less granulated & seemed to clump easier. We used to sift the formula to get rid of the lumps before mixing with water. Today only the Esbilac clumps and requires sifting. We also found we can blend a batch of formula and freeze it for use later. It thaws well and after shaking the jug it is the same consistency as if just blended. The bears do not seem to notice any difference. This helps a lot when we have to use a large amount of formula and are limited on time each day. Frequently, we will blend a batch on the weekend and freeze for use throughout the week. Whether mixed or not keep your Esbilac and Multi-Milk in the freezer to keep bacteria out. Milk Matrix 30 / 55 is also a substitute for Multi-Milk. It is the same as Multi Milk, but a bit less expensive. Order both Esbilac and Multi Milk or Milk Matrix 30 / 55 from UPCO:

UPCO  
P. O. Box 969  
St. Joseph, Missouri 64502  
(800) 254-8726  
Web site: [www.upco.com](http://www.upco.com)

Multi-Milk & Milk Matrix can be ordered by phone or on their web site. Milk Matrix 30 / 55 is available in 24oz / 6lb / 15lb. Esbilac is available in 28oz / 5lb. If you are a licensed wildlife rehabilitator and have your license number to give them, you can ask for the 10% rehab discount. We mix 15 lbs of 30/55 with 5 lbs of Esbilac.

We also use this formula for starved cubs that arrive late in the fall and even injured cubs who need that extra nutrition. It's proven to help cubs regain their normal weight and health much quicker when we provide it along with other food. We've had cub after cub arriving in a starved condition in late fall that improved dramatically when we added the formula to their diet. In one case, a spring cub was weaned at 3 months by someone who didn't know they nursed until at least 5 months old. The cub was sent to us about a month after his two siblings. He was half the size he should have been. We immediately added formula to his diet and in a month and a half he was as big as our spring cubs who had been on formula all along.



Although any of the Gerbers fruit baby cereal number 3 jars are ok to mix in the formula, the preference seems to be peach and blueberry buckle. Applesauce is another good one to add, but we buy regular applesauce rather than the baby cereal. Aside from mixing it in the formula, we use it on bread or cereal when the cub starts eating some solid food. Once blended the formula lasts in a refrigerator for 24 hours. However, we have gone beyond that period until the first feeding the next morning and the formula didn't spoil.

December, 2004

## BOTTLE FEEDING

Whether we bottle feed the cubs or start them on formula in a dish, it makes little difference as far as a successful release. We have done both. It is less time consuming to feed formula in a dish, but messier with more of the formula wasted. Bears turn dishes and tubs over immediately unless secured somehow. We prefer bottle feeding unless the cub seems to do well with formula in a dish. All babies need some nurturing - nurturing doesn't necessarily mean imprinting them. It means a routine feeding schedule, a secure environment in which they feel protected, the awareness that if they bawl for help you are there. We are trying to simulate a natural course of events as the cubs grow, and bottle feeding is part of that, and physical contact with a live body. Except in cases of an emergency, Sally is the only one that bottle feeds the cubs. It does not imprint them in a negative way. Instead, it gives them a sense of normalcy and security. It also satisfies the need to suckle and prevents nursing on the sibling's ear or their own paw. We also provide them with a small pillow of fake fur stuffed with hand towels. Leave one corner of the pillow open slightly so you can pull the towels out for washing along with the fake fur. The cubs love these pillows, especially a lone cub. By the time they start pulling the towel out of the open hole, they no longer need the pillows.

Creating the right size hole in the nipple can be a bit of a challenge. Even when you find just the right size hole, the bears can act as though the flow is too little and tug and yank on the nipple. The choking or gagging can be either because the flow is too great or that they haven't learned to suck properly with the bottle. If one cub is having trouble sucking properly yet the other is doing fine, that could be an indication the size of the hole is fine or it could be that one cub sucks better than the other. It can take time and trial and error to get it just right for each cub and there is no sure way to know but trial and error.



Five weeks old - eyes just opened

First time feedings are usually a frenzy of activity no matter what the age of the cubs. Some take right to it and some cubs take longer to learn to suck. A few cubs will want to nurse on your arm instead of the bottle. Sally starts them on a syringe (minus the needle) to get the taste of the formula, then lets them suck on her arm or hand and after a minute slips the nipple in their mouth. It usually works, but you might find you have to start the feeding that way for the first few times. Consistency is important and once you find what works don't keep changing it. The cubs will change it often enough without you doing the same. Until you have a routine, the slightest appearance of the bottle being withdrawn sends them into instant turmoil. They are very aggressive in taking the bottle. Be sure to have the second bottle waiting when you reach they age where one bottle isn't enough. Wear heavy clothes to protect you from the claws and maybe even glasses when the cubs are about 7-8 weeks to protect your eyes from flailing claws.

January , 2005

## BOTTLE FEEDING - continued

During the first few feedings, we take our cue from the cubs. They let us know the best way to give them the bottles. Our youngest cub yet arrived 2/20/04 at 3-4 weeks of age. After using the syringe for the first few feedings, she immediately took to the bottle and sucked without any problem. We've never had a cub overeat, but with cubs this young it could be possible. She would continue sucking until her little tummy bulged. We tried feeding hourly and less formula, but that didn't work for her. She was

better on a 2 hour schedule and more formula.

However, we left her always wanting more - how much more she would have taken is the question. She still seemed to be the one to decide how much time between feedings, but we were cautious about the amount of formula. In the next update, we will add a log of daily notes on feeding the 3 week old cub. This will give some guidance on what to expect.



Eyes just opening at 4-5 weeks

After the eyes open at 4-5 weeks there seems to be a dominant or sibling order in the way they eat. Sometimes one cub must always be on the right or left of the other cub. As they get older, insignificant details like a different bottle or nipple will create problems. They even show a preference for the color of the cap on the bottle. They probably associate that with the particular nipple they like. On more than one occasion we have

switched nipples to solve this problem. If you watch the behavior for clues, you will find the feeding process is smoother.

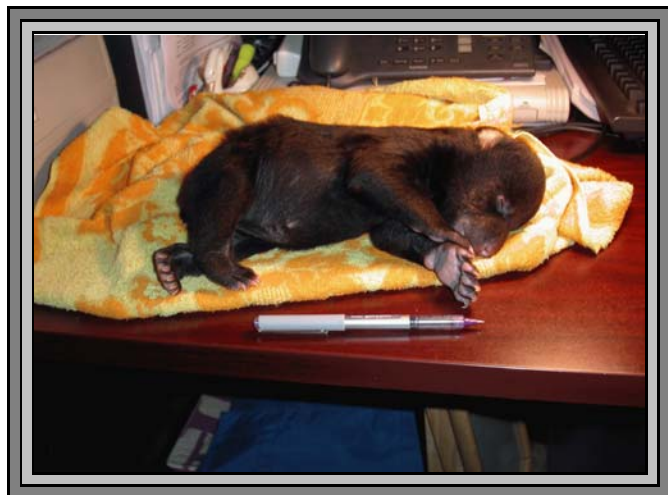
Some cubs will suck quite well. Others pull, tug, suck, yank, and a variety of other actions that will eventually get the milk down their throats. On occasion they will choke and gag, but usually clear it out themselves. If alarmed, pat them on the back as if burping them or gently rub the throat. They seldom need help. If the cubs are not sucking well, try positioning your hand under the chin, supporting the chin & bottle. Another trick is to cup the bear's jaw in your hand - the sense of something touching either or both sides of the jaw will often encourage the sucking action. Try gently slipping the nipple slowly in and out of the cub's mouth. Their sense of possibly losing the food will sometimes get them to start sucking by grasping the nipple and pulling on it. Sometimes a cub will "gape" while nursing. The bear opens and closes his mouth wide like a sucker fish without ever sucking. Squeezing the bottle to get a little formula in the cub's mouth will work, but frequently they do not bother swallowing. The milk will just slide down the throat. The 3 week old cub took the bottle lying on her stomach and just holding her mouth up to the bottle. To get some idea of their strength even at that age, she would hold her head down on the table & it would take all Sally's strength to get her head up just enough to slip in the nipple.



December, 2004

## BOTTLE FEEDING - continued

As she got older, she insisted on being held with her back to Sally's chest & the bottle held in front of her. Her grip was so tight it was often impossible to keep hold of the bottle if she happened to knock it sideways even slightly. At 8 weeks she was already standing up and leaning against Sally's leg and taking the bottle that way. Try all the tricks - one will finally work. If you let the cub show you, they will usually make it clear what position they prefer to take the bottle & it does change with age. After finishing the bottle the cubs will burp quite often. If they do not, burp them like any baby. Hiccups can happen frequently even when burped. If formula goes down the wrong way or too fast, they will gag, but are pretty good about clearing it out themselves.



3-4 weeks old - eyes shut

At six weeks old, we feed every two hours with night feedings. For three month old cubs, we feed every 3 - 4 hours with no night feedings. As they get older, the length of time between feedings increases until we are down to two feedings a day as the cubs reach 5 ½ to 6 mo old. Always let the cubs determine the length of time between feedings. They will tell you when they are hungry. Some will go longer than others, depending on when they were born. Since bears are born sometime between the middle of January and February, one cub may go longer than another. We have never had a cub go beyond six months old. There have been reports of bears in the wild still nursing

at 8 or 9 months old. Bottle-fed cubs will wean themselves, but cubs fed formula in dishes will continue wanting formula forever and will readily take it whenever offered.

We have never had any older cub overeat, but be cautious of the amount if feeding cubs with eyes still closed. Otherwise, the amount of formula consumed remained consistent even when we went an hour or two past the normal feeding time. At six weeks old the cubs took 2 to 3oz of formula every two hours. At three months they took over 10oz every three hours. At four months, 9 - 16oz every four hours and by five months were well on their way to consuming sometimes 4 to 6 10oz bottles each feeding with two feedings a day. The amount of formula varied with the individuals and with the amount of solid food consumed once the cubs start eating some solids. Obviously, the more solids the bears eat the less formula they will take.

Some take right to the bottle and others get so frantic they have a hard time. You will know when it's time to start wearing gloves - even with no teeth their claws can rip your arms and hands up pretty quickly just out of the franticness of feeding. Generally, they suck quickly and the formula is consumed in a brief amount of time. Then they want to nurse on your arm or hand for a few minutes to keep satisfying that need to suckle. It may all seem like a struggle, but just be patient and keep trying. If they aren't dehydrated there is time. Try adding a little extra honey or fruit flavoring at first until they really get the hang of it. Also try using a 3 cc syringe or larger (without the needle) to get formula in their mouth for the first time. The formula tastes different from what they are used to and it may take a

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## BOTTLE FEEDING - continued

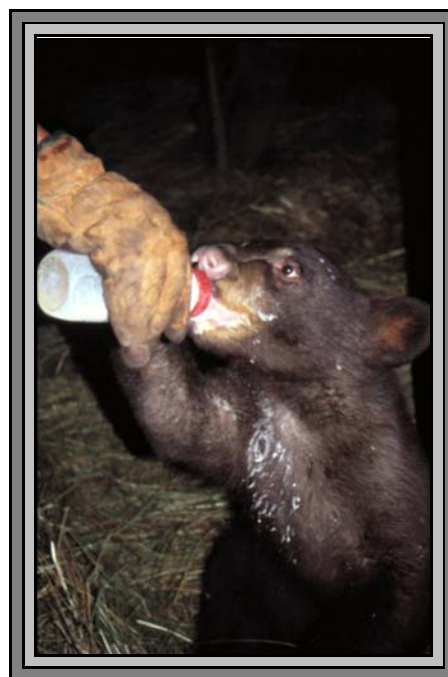
little time for them to accept it. It may be too sour tasting if there is not enough honey or sweetening flavor in it. When mixing the formula put whatever sweetener used with the water & taste it yourself. (Hint - tasting it with the powder formula already mixed in is not the most pleasant experience). Use a syringe and insert a little of the formula in the cub's mouth. Usually once they get used to the taste, they readily accept the bottle & then it is just a matter of getting them to suck on the nipple.



Even if it's a struggle for a day or two, just get some formula down them using the syringe and watch that they do not get dehydrated. To check for dehydration, just pinch the skin on the nape of the neck and pull it up. It should immediately slide back down into place. If it continues to stand up, the cub is dehydrated. Contact your veterinarian for help.

Whether they are bottle feeding or not, if the cubs feel safe, they will develop normally. They are more manageable if bottle fed. Whenever Sally needs to medicate or treat a wound, she does not need to tranquilize the bear in most cases. Due to bottle feeding and the nurturing the cubs received from that simple act, she can often handle them during emergencies. That does not mean they are tame or imprinted. It simply means they don't consider her a threat even when they are scared or hurt. It benefits both the cubs and Sally as their caretaker. From that standpoint alone, bottle feedings are well worth it.

Besides the benefits already mentioned, there is one other difference in behavior between bottle fed cubs and those that had little or no bottle feeding. After weaning, bottle-fed cubs have a much stronger sense of self confidence and independence. They can handle stressful situations and overall have a much stronger sense of what being a bear is all about. They are always the ones in charge within a group of cubs, the ones the other cubs look to for protection & security. Cubs who were not bottle fed or only received a few bottle feedings were insecure, frightened, shy, and uncertain how to handle some situations. That sounds exactly like the behavior most people expect from bears and want to see as an indication they are not "friendly" with people. However, with the rehab cubs this is not a positive behavior and is not happening for the reason everyone thinks. The behavior everyone expects will come later as their wild instincts began to mature. There should be no doubt the more confident cubs have a much easier time adapting to surviving on their own and still do not become problem bears.



December, 2004



## FEEDING FORMULA IN A DISH

Some cubs, if old enough will do just fine taking formula from a dish. We use very heavy ceramic dishes so they aren't so easy for younger cubs to tip over (at least we pretend that is the case). Always keep in mind that to be a real bear it is a requirement that anything that can be turned over should be turned over. No matter how hungry they are the first course of action seems to be "turn over the dish" and then become frantic when they can't find the formula. On the other hand we are watching formula soak away in the hay and thinking how much money that just cost. Save the heartache & hold the dish down with your hand until they finish - have more formula ready to add to the dish as your hand becomes fair game if they are still hungry and run out of formula. Otherwise, figure out a way to solidly anchor the dish - it's amazing how strong they are and determined when they really want something to happen.



As the cubs get older, it becomes more difficult to keep from losing formula when feeding it in a dish. Eventually, we built a heavy square wood frame out of 2 x 4 & slid the dish inside the frame. The metal dish fit just slightly under the top piece of wood on each side so the bears couldn't lift it out the top. The side boards and board in the back keeps the dish from sliding out that way. We padlocked the wood panel on the front side where we slid the dish into the



Formula dish

Wooden frame holding formula dish

frame. We also put legs on it and bury it in the ground at different levels. Or, we wire it to the chain link near a den or someplace they can crawl up on to reach the dish. It works most of the time, but nothing is guaranteed with bears except possible destruction. Since any formula just by the sheer volume used can be expensive, it is one of the reasons we prefer to bottle feed. All the formula is used and none is lost. Also, you know exactly how much they actually ate as

opposed to how much they got on them instead of in them.

Whether bottle feeding or using a dish, one thing is certain. At some point when everyone is eating nicely, a fight will break out. One cub will decide the other is getting more formula and try to take over that dish or bottle. They sort it out quickly, but as you can guess, formula in a dish may go flying during the turmoil.

December, 2004

## INTRODUCING SOLID FOOD

We introduce solid foods at nine to ten weeks. Start with soft foods like canned peaches, oatmeal, or dry cereal soaked in formula. At first they experiment with it, but do not eat much. Leave some with them between bottle feedings. The cubs like a thick mush. When starting them on solids we alternate formula



First solid food - canned peaches

with either oatmeal, dry cereal soaked in formula, bread covered with #3 Gerbers fruit baby cereal (same as used in formula), canned peaches/pears/fruit cocktail, or cottage cheese. As they get older, we switch from the mush to dry dog food mixed with a little formula in a bowl. We used to blend in some ground puppy chow with the formula in their bottle. We thought it might make the transition easier because they are already familiar with the taste and smell of the dog food. However, it didn't seem to make any difference and we stopped doing that. We also mix the dog food with formula, fruit or Gerbers baby # 3 fruit cereal to soften it. As they get closer to weaning we give them fresh fruits and vegetables. The bears seldom eat the vegetables. The cubs will often scatter the solid food, cereals and mush about the facility. Sometimes there is more on the cubs than in them. However, be persistent.

They may play with it, but they will eventually start eating it. This is the time when much of the food goes to waste.

Some cubs will drink formula out of a dish from the beginning. Others take a long time before starting this. Even if they drink formula from a dish, they may still need the bottle. Weaning them from the bottle too early or cutting back too often on bottle feedings has some risks. The cubs will nurse on their pads or each other's ears to satisfy the need to suckle. Sores can result. We always offer formula in a bowl with normal bottle feedings. If the cubs drink the formula we will drop one bottle feeding.

Around four months old, the cubs should be eating some dry dog food. At times it appears that will never happen. Continue to make dry dog food available at all times.

They will begin to eat it at their own pace. At first it looks as though they just scatter the kernels



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## INTRODUCING SOLID FOOD - continued

everywhere without eating any of the dog food. Chances are they do eat more than it appears. We once observed a cub that was almost six months old and as far as we knew had yet to eat any dog food. We worried that he was eating only fruit. Then one morning we saw him take one kernel as he walked past. That is all we needed to see to know that he was eating the dog food too. He was just not obvious about it.

After the cubs wean themselves from the bottle at about five to six months of age, we continue providing formula in bowls for a short period. Combined with the solid food, it aids their growth and development. Their diet after weaning consists of fruits, dry dog food, vegetation, fish, willows, acorns, bees, wasps, ants, and an occasional mouse who tried to join the picnic. In fall before starting hibernation we will offer deer or elk on a carcass when available. Offering it during summer months is not practical due to the massive amounts of wasps that collect and the heat which spoils the meat so quickly. If we offered pieces of meat only, they will usually ignore it, but will always eat meat if the carcass is presented. Some cubs love fish. Some will not eat fish at all and when they do, it is always salmon or trout. Like people, their preferences vary with each individual. Bears rarely eat any vegetables. However, carrots are favorites of most of the bears.



We also provide grasses & willows. The cubs prefer the leaves off one of three willow trees on the property. The willows seem to affect the cubs almost like a mild tranquilizer. In the main enclosure they eat lots of vegetation and dig for worms and bugs.

January , 2005



## INTRODUCING CUBS TO THE MAIN REHAB ENCLOSURE

Introduction to the main enclosure takes place over a few days. The size and openness of the enclosure intimidates the cubs. Sally starts by spending several hours with them the first day they are introduced into the main enclosure. With this period of adjustment they adapt better than if just left alone. If there are storms brewing, it can be very frightening for them. One single cub bawled for two hours during a thunderstorm. Sally ended up spending the night, but the next day the cub was fine by herself.

The initial reaction is both curiosity and fear. They will investigate everything, always keeping an eye on Sally. If frightened they climb to the top of the wire or try to climb on their foster mom. If left alone while inspecting their new home, they pay little attention to her departure until alarmed or they realize she is not there. Then they plant themselves in one spot and start to bawl. Once reassured Sally has not abandoned them they continue playing.



Weather may create a problem on occasion. A severe thunderstorm during the first week can frighten them badly. Sometimes the cubs will stay hidden in the hollow log. Other times they will panic and run frantically around the enclosure. If that happens, we return them to one of the more protected

enclosures until the storm passes. After a period of about two weeks, they feel secure in their new home and the storms no longer bother them.



In time they begin to express their curiosity and interest in the world outside the enclosure. The cubs are quick to comprehend the wire keeps them in and it also keeps everything else out. As their security level increases with each day, their curiosity level also increases. This does not mean they are tame or imprinted. If we let them wander around outside the enclosure, their behavior would be quite different. The cubs would be much more cautious and alert than we see in the protection of the enclosure. In fact, within the first 2-3 minutes outside

the enclosure, they would quickly make their way 30 feet up the nearest tree. The full maturing of their wild instinct takes place later in the fall. Their behavior then will reflect much of what everyone often expects to see at too early an age. Until that time they feel safe and secure and will therefore express a more relaxed interest in their surroundings.



## WEANING

If we are only giving formula in a bowl and not bottle feeding, cubs will continue to accept formula right up to hibernation if we let them. Although they wean themselves off the bottle, we will wean them off the formula when it comes to feeding formula in a bowl. If bottle feeding, the cubs will tell us when they are ready to stop nursing. Usually they wean themselves between five and six months of age. Keep in mind the estimate of their age can be 3-4 weeks off as cubs are born in January and February. Do not be alarmed if the cub does not wean when you expect. Assume the age estimate is a few weeks off and continue until sure the cub is at least six months old. When down to two bottle feedings a day they will suddenly stop wanting a bottle for one feeding. They will anxiously accept the bottle once a day for about another week. Then they show little interest in bottle feedings. We continue offering formula in a dish for about two weeks after we stop bottle feedings.

They may stop asking for the bottle as early as five months. We've only had one cub that appeared ready to take a bottle with her when denned. She continued demanding an evening bottle until almost seven months old. She was a small cub and we felt the extra formula could help her growth and that she probably needed the extra time. We were about to enforce weaning when she rejected bottle feedings.



The value of the formula to their growth became obvious in two situations. An inexperienced individual weaned some cubs when three months old. We received them at the age of five months.

Although the same age as other cubs weaned at the normal time, they were a third the size they should be. They were too small and their fur was not in good condition. We supplemented their daily food intake with formula for four weeks. Their growth shot up dramatically and they appeared much healthier. Their coat took on a new shine and overall development seemed to increase rapidly as if to make up for lost time.

In the second situation, a man used the two cubs to train hounds. The experience left the male bear injured. They were in the care of another rehabilitator for about three weeks. He transferred the cubs to us after the wounds healed. Undoubtedly, the cubs did not get the proper nourishment during their ordeal with the houndsman. They were still quite small for their age so we added formula to the diet. A month and a half later they were the same size as the two bottle-fed cubs. Within three months the male weighed more than our bottle-fed male. These situations clearly show what a difference the proper formula can make in the bears growth and development. The nutrition offered by the proper formula gives the cubs a good start toward gaining and maintaining their weight during the growth period. As expensive as it can be, don't short change on the formula. Aside from growth and development you also risk other health issues by using a formula of lesser quality or one that doesn't address the nutritional needs of bears.

By five months old, the cubs are eating all kinds of solid foods. We keep a permanent dog food dispenser full with 100 pounds of dry dog food. The bears have their own likes and dislikes. We consistently tried various kinds of dog food. The cubs clearly prefer Albertson's brand chunk style over all other brands tried. Second choice is Purina Dog Chow. In reality, any balanced dog food will work - it just depends on their preferences. We had little success feeding Iams, Science Diet, and other brands of premium dog food with some bears. The size of the pellets seem to make a difference as well - they do not like the smaller kernels and spend more time scattering it than eating it, causing a lot of waste. Since the cubs prefer Albertson's chunk style and do very well on it, we continue to use it.

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## WEANING - continued

By late October a group of four cubs will easily consume more than forty pounds of dry dog food in two days. Each day they eat enough fruit to fill two five gallon buckets. When available, the cubs will consume most of the acorns we give them and eat lots of vegetation that is available in the enclosure.

An average size deer will last about two days. They will not eat meat unless it is on a carcass. Packaged meat draws little interest except occasionally in spring as they come out of hibernation. Put a carcass in and it immediately attracts the cubs. One year someone donated a sheep carcass. The cubs checked it out, but would not eat any of it. After two days we had to dispose of it ourselves. Fish is an individual preference. Some bears will eat as much fish as we offer. Others will not eat fish at all. Rarely will the bears eat any type of fish except salmon or trout. We thought rejection of a food item was due to neglect in offering it when young. However, that was not so. When provided the food items at a young age, the same likes and dislikes held true during the rehab period. Frozen grapes, avocados (when donated), and acorns are their favorites.

The grocery stores will save the fresh fruit from the displays as they clean them each afternoon. Relying on this is not practical if we have more than one or two bears. Too often we get foods the bears will not eat or we do not get enough to feed all the cubs. However, we make a pick up when possible and now have enough refrigerators to store extra fruit. During the summer months, we sometimes get enough to fill our needs without buying fruit. As the fruit season ends so does our supply. We begin stocking up early by buying in bulk from fruit stands and produce companies. We freeze some fruit for use in spring when fruit is not available or is too expensive to buy. Now we rely on the community and people with fruit trees to supply fruit, but still have to buy produce a fair amount of the time. The hot weather in



There is something moving in there!

August makes it impossible to keep fruit for more than a day without refrigerating it. We have four large refrigerators that keep the fruit for weeks if necessary.

The cubs readily eat grasses and willows. There are a variety of wild grasses and vegetation available inside the main enclosure. They eat bees, wasps, ants and an occasional mouse. During the rehab process we offered a variety of fruit and vegetables after weaning. The chart on the following page shows the food items and the frequency the bears ate that food item.

We don't offer Twinkies, donuts, or sweet treats like that. If we have to give an oral medication, we will offer it with a sweet roll or Hostess pie. However, that is the only time the cubs are given this kind of food.

Many times we are asked about feeding the bears dog food by park officials or wildlife agencies. Granted, dog food is not a natural food source. In rehab we don't have all the food sources available

January , 2005

## WEANING - continued

to us that bears would naturally eat. We can on occasion get some of the wild berries or onions they eat, but generally, we have to rely on what's available to us as substitutions for some of the natural food. The concern seemed to be that people with cabins who have dogs & put the dog food on their porches would attract bears who were used to eating dog food. The reality is that any bear, whether he has ever tasted dog food or not, would be drawn to anything he thought was a source of food. Frankly, although it is just an opinion, it appears the bears are quite happy to have all their natural food sources when they are released. That may account for why spring released cubs don't instantly become problem bears with all the campers and alternate food sources easily available to them.



Dog Food dispenser



Searching out wild berries

## Food List

FOOD ITEM	FREQUENCY	FOOD ITEM	FREQUENCY
Apples	Always	Cabbage	Frequently
Grapes	Always	Leaf Lettuce	Always
Raisins	Always	Celery	Seldom
Plums	Always	Corn on the Cob (Corn)	Always
Oranges	Always *	Parsley	Frequently
Bananas	Seldom	Potatoes	Seldom
Watermelons	Frequently	Tomatoes	Seldom
Cantaloupes & melons	Frequently	Radishes	Frequently
Strawberries	Seldom	Spinach	Frequently
Blueberries	Always	Rhubarb	Seldom
Blackberries	Always	Zucchini	Seldom
Cranberries	Frequently	Turnips	Seldom
Peaches	Always	Cucumbers	Seldom
Apricots	Always	Dry Dog Food	Always
Cherries	Always	Willows	Always
Pears	Always	Grass	Always
Raspberries	Seldom	Dandelions	Always
Tangerines	Frequently	Insects	Always
Avocado	Always	Mice	Always
Carrots	Always	Salmon	Always **
Cauliflower	Seldom	Trout	Always **
Asparagus	Seldom	Other Fish	Seldom
Green Beans	Seldom	Beef	Seldom
Peas	Seldom	Deer Carcass	Always
Acorns	Always	Birds	Always
Wild berries	Always	Vegetation	Always
Pumpkin	Frequently	Pinneapple	Seldom

\* Although the bears will always eat oranges, we only give them on rare occasions

\*\* Bears who like fish will always eat the fish - bears who don't like fish seldom eat even the salmon or trout

December, 2004



## IMPRINTING - HANDLING CUBS

Imprinting is a concern of every wildlife rehabilitator. However, it is only one of several concerns. Focusing solely on handling or the exposure to people as a cause of imprinting is a mistake. It is our experience that bears are not adversely imprinted by handling or from exposure to people during rehab. If taming or domesticating the animal is the goal, excessive handling will result in imprinting. In rehab, imprinting is a concern, not a goal. Several conditions can increase the chance of imprinting. To avoid imprinting, a rehabilitator must consider all factors when handling the cubs.

- 1) What are the circumstances surrounding the bear before receiving it? Did someone have it for an extended length of time during which they handled or treated it like a domestic pet?
- 2) What are the circumstances that brought the orphan to you? Was it orphaned, abandoned, hurt, or confiscated by Fish and Game?
- 3) How old is the cub? Age determines the degree of development and the cub's vulnerability to imprinting.
- 4) Was the cub injured and required handling to treat the injuries? How severe were the injuries? How much handling will the animal require in the future? How long will treatment last?
- 5) What is the individual personality of the bear?

Handling alone is not the sole cause of imprinting. However, we should look at each factor above as a possible concern for imprinting. With orphaned cubs personality seems to be a major factor in whether the cub will become a problem bear when released. Two of the three cubs that were labeled problem bears had very extreme personalities. Their personalities were very different from each other, but extreme in every way. One cub was very hyperactive and never sat still for more than five minutes at a time. She was interested in everything going on around her and had an unusual curiosity about everything. She was difficult to handle, insisted on interfering with any cleaning or feeding. The other cub we think was orphaned in a traumatic way and that impacted his behavior in a negative way. He was a very needy bear, always wanting attention, never satisfied or indicating he felt any sense of security no matter how hard Sally tried. He would bawl constantly if he couldn't see her at all times. He expressed his needs by getting frustrated and angry. Even the normal calming and happy playfulness that takes place after bottle feeding was turned into a very rough angry attempt at playing with hard swats and powerful bites.

When working with cubs, be aware that nurturing is important when young. Nurturing doesn't necessarily mean playing with a cub as you would a puppy or any other pet. It means establishing an environment in which the cub feels safe and secure. Keeping to a routine throughout the day when feeding and cleaning the bedding is one way to do that. With nursing cubs, especially cubs under 9 weeks old, it is inevitable that they will see the person feeding them as the foster mother. That is why only Sally does all the bottle feeding. She doesn't want the cubs to identify with "people" in general as their foster mother. Their security comes from knowing that Sally is around. They don't need constant handling or touching, but do need to feel that mom is close by. For example, after feeding a cub placed in a carrier will bawl for two hours until exhausted. Yet that same cub will fall sound asleep in two

## Imprinting - continued

minutes at Sally's feet, just a paw touching a leg or foot. That is the security they need. With each week the cub will need and want less handling and contact and be more interested in checking out the surroundings. You'll know by the unexpected little nip you get when you try to pick up the cub or handle it when it has no desire to be handled.

A human infant is not likely to develop normally if just fed and left in the crib without any nurturing. It is the same with all youngsters, including the cubs. We can provide a nurturing atmosphere without imprinting. Sally's first bear caused concern because the cub turned from a quiet, gentle teddy bear into a hurricane on four feet. It was a complete and instant behavior change unlike anything previously experienced with other wildlife. When she discussed it with John Beecham, his comments proved to be true with every cub. The cub's change in behavior meant it felt safe and secure enough to be what it was - a bear. His words expressed the very basis of bear rehab. We were doing something right. Just give them the time and the security to be what they are and they will quickly go about the business of being a bear.

After working with cubs for a few years, one thing is certain. Of all the wildlife previously handled, there is none more knowing of who they are and what they are about than bears. If we give them the time to develop and the security to feel safe while doing it, it is unlikely the result will be a nuisance bear.



Obviously there is concern by wildlife agencies when it comes to releasing orphaned cubs raised by humans. We are not talking about a fox that might get in the chicken coop. We are talking about a bear who can do serious damage. However, the average person without experience handling wildlife or the unique demands associated with that is not the person raising these bears. We are talking about experienced wildlife rehabilitators who know and understand the techniques of working with wild animals. Our experience with these cubs shows the risk of imprinting and creating a nuisance bear is minimal. The time when we can affect their behavior to imprint

them is when their wild instinct starts to mature. By then, we have little contact anyway. Once weaned, the cubs have little interest in their human caretakers or foster mother. Their involvement is limited to providing food, water, and cleaning.

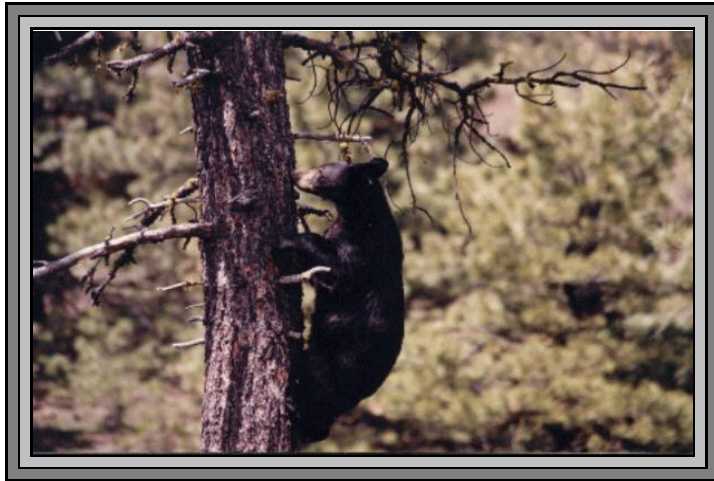
Another factor to consider is that bears are not social animals like some species. As adults they are solitary animals by nature. That makes bears even better candidates for rehab than other species. Being social with other cubs in rehab and being dependent on their human foster mother is quite normal for young cubs. The cubs will always identify Sally as their foster mother. However, once they wean

December, 2004

## Imprinting - continued

themselves, they do not have the same need for her as a security blanket that they did when younger. They no longer need to socialize with her and prefer the company of the other cubs. In the same vein, when released, it is even more unlikely they will seek humans out for company. Even siblings, when first released will sometimes part company immediately and begin their solitary life.

Wildlife agencies' main concern about bear rehab are bears that become habituated - bears that are familiar with people and show no fear of humans. Caring individuals will often place food out for orphaned cubs. Wildlife officers may be reluctant to consider rehab in those situations. They expect the cub will definitely become a problem bear due to the experience of receiving food from humans. Persuading agencies that a cub taken from this kind of situation is still a good candidate for rehab can be very difficult due to preconceived ideas.



This cub came in during fall weighing about 15 pounds. At release he weighed about 140 - does he look underweight or stunted in growth?

Several of the more than 100 bears IBBR received since 1989 were cubs found in fall, underweight and coming from situations where people fed them. We never lost a single cub to starvation. Some of those cubs weighed only 10 pounds. Given the proper care and diet, they doubled their weight in no time, continuing to regain their strength and health daily with no side effects. Orphaned cubs are always underweight unless found immediately. Even when found right away, in poor food years they can still be underweight. Bears are amazingly quick to bounce back, even if anemic or dealing with other issues. Unless the organs have started to shut down, no matter how thin the cubs might be, they recover. There is no reason not

to give them a chance to survive, especially knowing how resilient they can be.

Habituation is one of the biggest misconceptions we face in bear rehab. Orphaned cubs are not adult bears and do not think or act like adult bears - just as our own kids do not think or act like adults until they reach adulthood. These cubs go through stages of development and their behavior changes accordingly. Black bear cubs are dependent on their mother for the first 16-17 months of their life. Their behavior is one of dependency. However, a cub in rehab becomes independent shortly after weaning. Although they rely on us for their supply of food and water, they become very independent of us in all other ways. They identify with the enclosure in the same way as a cub playing near his sleeping mother. Once they feel safe in the enclosure, that enclosure becomes their security blanket. As they get older, there is less need for that security blanket. Bears are naturally curious and unless threatened are going to express that curiosity. Depending on the stage of development, cubs may not run in fear of humans and will show curiosity. However, put that cub outside the enclosure and that same bear will be up a tree in the blink of an eye, woofing and clapping his lips all the way.

An orphaned cub is hungry, looking for food more than security. To survive, a cub will do what is necessary by temporarily sidelining their normal instincts. Humans would take risks and do things we would never consider if we were not starving. Although the need for food alters the degree of wariness toward humans for a period, it does not mean the cubs are habituated. Over the years we have taken cubs into the rehab program that people fed for a month or more. Sometimes, people were even hand feeding the cub. Once taken out of that situation, placed in rehab, provided with a sufficient food supply,

December, 2004

## IMPRINTING - continued

the cubs behavior reverted to the same as other cubs in rehab. We released these cubs in late spring. **Without exception, none of our cubs taken from those situations ever became problem bears!** Occasionally other factors may also come into play to create a nuisance bear. However, to assume cubs are habituated because they were starving, ate food left out by people, or do not run in terror at the sight of a human is unrealistic.

In 2001, we accepted two cubs from Yosemite National Park. Their mother was a problem bear in the campgrounds and became increasingly aggressive. Despite relocation and aversive actions by the park rangers, she continued to bring her cubs into the campgrounds searching for food. Everyone was concerned that the cubs would learn that behavior and repeat it. Since no one knew how much they retained of that experience, IBBR took extra precautions when the cubs arrived. We canceled all on-site education programs, kept everyone away except Sally, and she curtailed her daily work to reduce contact even more. We returned the cubs to Yosemite in January 2002. As of 2004, they have not shown any inclination to repeat the nuisance behavior of their mother. They have become part of the normal population living in the park who do not seek our people and campgrounds.

We can isolate them totally from all humans, or from all except the caretaker. We can choose to bottle feed or feed in a bowl. We can do a few education programs for schools with the very young cubs, or none at all. Either way, if we just allow them to go through their stages of development they will become the bear they should be and not the problem bear everyone expects. Placing the cubs in dens during hibernation offers the bears additional time to adjust to their new surroundings and lessens the risk of running into people. Although we have done several spring releases with only one bear getting into trouble, denning is always the preferred method.

One question often asked is, how do we train them to be bears? We do not need to teach bears to be bears. They are very instinctive animals. It may take a little longer to get there without mom, but they will get there. Ideally, if we lived in a wooded area, we could make daily excursions in the woods. We could show them natural foods and give them the experience of being in the woods. Ben Kilham in New Hampshire has the opportunity to do just that. IBBR is here in suburbia, sandwiched between housing developments. Yet both programs work and both continue to successfully release orphaned cubs without the bears always becoming problem bears. That makes a statement in itself as to the mind set that a human cannot raise and successfully release orphaned bear cubs.



December, 2004



## BEHAVIOR DURING REHAB

When cubs first arrive, they may be afraid and stay at a distance. If orphaned for a longer period, they will quickly turn to Sally for food and attention. Although accepting of us, they remained wary of strangers. We keep human contact to a minimum with only Sally bottle feeding the cubs and VP Tom Robb as an emergency back-up for weaned cubs.

Stress is sometimes a problem. The cubs express it in several ways. Usually, they will bawl if left alone. Some cubs will jump up and down against a wall or fence as if trying to climb it. They may act erratic at feeding time, alternating between refusal and acceptance of the bottle. Restlessness could also be a sign of stress.

To lessen the stress, give the cubs a quiet area in which to hide. A dog kennel is perfect for this. Put in a few blankets or towels. Quite by accident, we found the cubs immediately attracted to a bedding of fake fur. We tried grass hay, straw, towels, blankets, and shredded paper (courtesy of the cubs). Although they used these items, they always took the fake fur blanket with them wherever they slept. When feeding, Sally will often drape the fake fur over her. It not only serves as protection from the claws and the mess, but the cubs seem to nurse more quietly. They seem more content during the whole feeding process.

Start a routine and stick with it. The security they feel from their surroundings, the routine, and acceptance of the caretaker will reduce the stress. One sign that the cubs are feeling secure is the purring or chortling sound they display. However, they can also start this when stressed to reassure themselves. Telling whether it is stress or contentment is easy from the situation. They will also knead a blanket or pillow as cats do. Another sign they are feeling secure is when that mellow "teddy bear" turns into a tornado on four feet. Their aggressiveness and exaggerated swats, bites, and nips let us know they are content and feel safe in being a bear around us.

The cubs wean themselves from Sally as the caretaker about the same time they stop taking a bottle. When that happens, wrestling and playing with each other becomes more important. Although subtle at this point, it is the first stage of the wild instinct developing. Between the age of five and eight months they distance themselves even more.

Often the cubs will display shyness around people unless the caretaker is present. Some cubs however, are unafraid and will express their curiosity and interest to the fullest degree. After much practice (during which she often sounded like a wounded dog), Sally mastered the woof that sends them to the top of the enclosure. When necessary, she will send them up the tree or wire panel as the female often does with her cubs. Her ability to do this diminishes rapidly once weaned and she has to perfect it again each year.



December, 2004

## DAILY ROUTINE

Once the feeding schedule is set, our daily routine seldom varies. We repeat most of the routine at each feeding. By the time we wean the cubs, we are down to cleaning the enclosure twice a day. We continue doing that until it's time to prepare the bears for hibernation. Then we clean and feed only once a day (depending on the number of bears).

- Wash and disinfect bottles and nipples
- Clean any toys
- Clean and refill food and water containers
- Prepare solid foods for the rest of the day
- Check the enclosure for needed repairs
- Clean the enclosure
- Pick up scat (2 - 3 times a day)
- Turn over dirt in areas used for urinating
- Change bedding and hay if used
- Thaw frozen meat, fish, or fruits needed for next feeding
- Prepare formula for the rest of the day (sometimes we prepare several days formula and freeze it)
- Take out any destroyed items and replace with new items
- Collect grass and willows (for cubs not in the main enclosure where they are already available)
- Drain & refill the swim tub
- Refill dry dog food dispenser



We spend a lot of time preparing the formula and fresh fruit we provide daily. Five freezers hold excess fruit, fish, pieces of deer carcass, and powdered formula. Often the grocery stores and produce companies will give us boxes of fruit. During the summer, we pick up fruit daily and freeze whatever we do not use that day. The bears like the thawed mushy fruit, but it takes more to equal the bulk of fresh fruit.

Keeping the enclosure clean is a constant chore. During the hot summer months we pick up scat three times a day. A sprinkler system sits on top of the chain link roof that we program as needed. We use it to treat the bears to a shower or to wash down the enclosure. Once every two or three weeks we will rearrange some of the logs and structures. This gives the bears a chance to express their curiosity. It challenges them to take apart what we put together - a challenge they always conquer.



Tas & Willow greet David Soul & Sally Maughan as they inspect the enclosure

January , 2005

## STAGES OF DEVELOPMENT

During the first three or four years of this program, people who saw the cubs were always surprised. Whether eight weeks old or six months old, they expected to see the bears run in total fear as they approached. Despite her experience as a wildlife rehabilitator of many years, Sally lacked experience during the earlier years to address this absence of "wild behavior".

For the first five years of this program, Sally watched the cubs every day, for eight or nine months each year. She spent a minimum of three hours a day, at all hours just watching their actions and reactions to the world around them. Some days started at 7AM, others at noon, 6pm, or 10PM. At least twice a week she would go out between midnight and 5AM. She came to know the cubs during the first year of their life in a way others can't. Yes, they were in rehab and not in the wild. However, it is doubtful anyone would have been able to observe them in the same way or as consistently in the wild.

Over time, from those thousands of hours came a clear understanding of the bears development during the first year. Cubs, just as other wildlife and our own children go through various stages of development. We don't expect two year old children to act like a teenagers. Yet for some unknown reason, we expect five month old cubs to act like adult bears. Our expectations are simply unrealistic. Bear cubs go through comparable stages of development similar to children. The difference is that it happens over a period of months rather than years. Sally has narrowed it down to four main stages of development:

**Infant Stage - from birth to about eight weeks.** The cubs need nurturing, closeness, security, formula, some very primitive play, and sleep. It's all about feeding every one to two hours around the



3-4 weeks old

a baby gurgling and smiling and the body movements that go with it. That is pretty much what you see in the cubs trying to play when their eyes are still closed and for a period right after the eyes open at 4-5 weeks. When the eyes open, play consists of gumming your hand or their own paws, kicking and pushing, and a lot of tossing of the head. They love being placed on their back on a soft bed or chair and playing footsie or having their tummy tickled or rubbed while they twist and kick

clock, stimulating bowel movements, responding to cries of need. Surprisingly, even with eyes closed, the cubs display some play behavior. It's mostly through twisting body movements, legs kicking, and mouth opening in a gape of sorts while tossing the head from side to side that this play behavior exhibits itself. Imagine



Trying to play

December, 2004



## STAGES OF DEVELOPMENT - continued

trying to stop it. It is a time for play even at this age. Play behavior is just a gentler version of that between two older bear cubs. It consists of gentle ear tugs, mouthing the paws (only with a hand & not your mouth), grabbing a bit of fur on the neck or shoulder and using your hands to roll the cub around as another cub might do when lying on top or pushing the other cub. All that type of behavior is easy to simulate even if you aren't a bear.



Stool at 3-4 weeks

Even at this early stage, stools can be formed or loose. The color can vary from bright yellow to a greenish-blue, to a brown. It really depends on what you put in the formula. Blueberry Buckle baby cereal creates the greenish-blue color - peach creates yellow or brown. Sally stimulates both before and after feeding to keep the carrier and the bedding cleaner. Just rub a warm wet cloth softly in a circular motion and urine will usually flow quickly. Stools generally won't come with each feeding until later when the bear is more active.



The pads on the feet have grey coloring where fur will soon appear. By twelve weeks, the black fur is in place on all the pads and the baby pink skin has turned dark and toughened up.

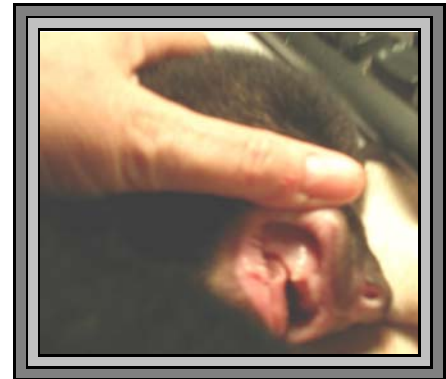
Until the eyes open, Sally will always burp the bear cubs. Once the eyes open, it depends on how active the cub is after that. Continue burping the cub as you would a baby until you see that the cub burps without your help after each feeding. Hiccups are a common occurrence even after the bear is active & despite burping. Based on Sally's observations the eyes open anywhere from 5-6



Eyes just opened

weeks. In previous years, Sally had cubs aged at 5 weeks with eyes clearly having just opened that day or the day before. The cubs were still wincing and the outside corner of each eye was still slightly sealed. In 2004, we estimate the cub who arrived with eyes still closed to be 3-4 weeks on arrival 2/20/04. It's always possible to be a week or so off. The eyes started to open 3/01/04 which would be at 4-5 weeks. One eye started to slit open about midnight and by 11am was open all the way across. The other eye started opening about 3am and by 5pm was fully open. She

wincing for a day or two, but all her activities increased. Within 4-5 days of eyes opening it was clear she was focusing better & seeing at least some detail. She would study Sally's face as if trying to figure out what that funny looking thing was that stared down at her - probably worried she was going to look like that too! She started reaching for things, but probably just seeing shapes rather than a lot of detail.



Upper canine just peeking through

The teeth on the upper and lower back jaws can be felt like little mountain ranges under the skin. At about five weeks, the front canines start to poke their way through the skin and you can feel the sharpness of the upper and lower back teeth even though they take longer to poke through. The upper and lower front teeth will poke through the skin, but don't seem to continue pushing through, probably because nursing would be painful for mom if they did. By 6 weeks the upper & lower back teeth were through the skin slightly.

December, 2004



## STAGES OF DEVELOPMENT - continued

### The Terrible Twos - from about eight to twelve weeks

The cubs are walking around, still sometimes falling over. They check things out, they lie on the floor under the desk and spend half an hour just playing with a pant leg or a boot while Sally is working. Naps are still frequent, but not as long and play during the early stage is still gentle. Cute behavior is the norm and everything is going along nicely.



Attacking the boot

The terrible twos just sneak in without warning. It starts innocently with the gentle nips turning into a hard bite followed by a wired up bear or even one that is obviously angry. It is probably the most trying time of the rehab process. The cubs take about a week after the eyes open when they become determined to be active, learn to walk, sit, stand, and even climb. Despite the fact they fall all over themselves half the time, they

keep trying and by eight weeks they pretty much have it mastered. They are running around getting into all kinds of trouble. Keeping one eye on them and constant supervision when not in a carrier is a must. The world is their playground and they intend to check out every corner and destroy much of it. Nothing is safe. Sally lets the cubs run around her home office as she works,



Getting ready to climb

but everything has to be put up high out of reach.



A short nap

Bears are not welcome in some areas so those must be blocked off. Here's a tip - use large plastic bins one stacked on top of another to block for height and width. Put something a little heavy inside like some books. The claws are useless at this stage against the slick plastic so the bears can't climb it or get enough grip to tip it over. Actually, if they are determined and the bins have any raised areas on the lids, they probably could move them. However, they get bored easily. If things don't happen quickly at this stage, they are on to something else.

Suddenly and without warning, the first temper tantrum hits. Maybe it's because the formula isn't ready immediately or the cub is bored with the pant leg. Maybe it's because they want that door that was always shut before to be open. Or, it's time for bed and the cub has no intention of calling it a night. Always be prepared for the bite or nip or swat during this time and don't assume it is going to be a gentle one. Play gets very rough now and the sweet little cub that barely clamped on your hand before will now clamp hard and start to shake your hand. Sally would never compare an adorable cub to a shark, but she says it reminds her of how sharks grab and shake their food...only in her case, it just happens to be her hand. The cubs insist on going wherever they aren't supposed to go. They want what they want, when they want it and they definitely want whatever Sally has made clear is off limits. They test Sally constantly and if they don't get their way, the cubs are quick to bite, claw, get mad and swat or just plain attack. Usually it's Sally's leg that gets the full attack, but claws and bites go right through even heavy denim. The bears still play nicely, but the minute they feel you are going to make them do something they don't want to do (like sleep) or you are going to keep something from them that they want, the temper comes out. It's usually over in minutes, but if you aren't watching for it or prepared, you will get some vicious bites

December, 2004

## STAGES OF DEVELOPMENT - continued

and bruises. Personality can also dictate how difficult this period will be. Depending on the cubs personality, the tantrums may be frequent and very bad. Other times less frequent or much milder.

Discipline - we like to think we are in control of a situation, but like coyotes, bears don't accept discipline. Instead, discipline consists of using tactics like distraction, gruff voice, sudden noises, a favorite or new toy to sideline the bear from whatever negative behavior is happening. Control is in getting through the terrible twos with as few wounds as possible and hair intact. Sally says pulling hair and grinding teeth were invented just to get her through this stage. Mother bears will simply swat the cub and send it rolling when it gets obnoxious. Sally did this a couple of times early on while trying to simulate what the mother bear would do. The guilt she felt far outweighed the almost imperceptible temporary



Finally - a bear sound asleep

improvement in the cubs behavior. The only difference was the cubs didn't seem to get mad and come back at her as quickly for telling them no. Other than that the behavior didn't change much. Now she uses gruff warnings and the slap of a glove on the desk to get their attention. They do listen, but as the terrible twos progress, the warnings are not always effective. When that happens Sally has to physically pick them up or shoo them away from trouble. That usually results in a brief tantrum followed by an immediate run back to the same trouble area. The cubs can repeat this process over and over and each time they get angrier and the attempted bites get harder when you try to stop them. Having thick gloves to grab quickly are a must during this time. Sally wears leather gloves with a thick inner wool lining and the pressure from the bite still leaves bruises. You can

purchase them at a hardware store, but make sure they have a thick lining or they will be useless. If the cub wanted, it could probably break fingers from the pressure in the jaws when they clamp.

Possibly the worst part is the misguided belief that once exhausted the cubs will sleep. It just doesn't happen that way most of the time. The cubs seem to have found unlimited energy & just don't fall asleep easily. In fact, even exhausted, they fight sleep. If Sally puts them back in the carrier while they are still awake they will bawl for two hours. She waits until they settle down and start stretching out on the floor as if dozing. If the cub goes into a sound sleep she can move them to the carrier. Don't be fooled - cubs can sleep soundly with their eyes open so watch the body movements. They kick and jerk just as we do in our sleep. If not in a deep sleep, the least movement or sound seems to alert them. They come alive instantly. Then the grouchiness sets in and they are ready to do battle - serious battle. The grouchiness indicating they are fighting sleep is accompanied by low moans and groans for half an hour or so. Sally calls it bear grumbling.



Sleeping with eyes wide open

December, 2004

## STAGES OF DEVELOPMENT - continued

During the terrible twos with a single cub, Sally introduces Lelani, her German Shepherd to the cub. Having been in the room while the cub was housed in a vari-kennel, the bear is already familiar with the site and smell of Lelani and knows she is not a threat. Lelani acts as a surrogate sibling until another cub arrives. Wrestling and playing is very important and Lelani can both take and give the nips and tugs that are so much a part of bear play. It might seem odd considering hound hunters use dogs to hunt bear, but bears are very smart. Bear expert John Beecham suggested it with a single cub after having raised cubs during his bear studies.

The cubs can easily differentiate between dogs. Ronin, the police dog is not receptive to bear play and prefers to be left alone. The bears clearly recognize Ronin is not a playmate. However, the temptation is just too great at times to keep them from purposely tormenting him. They are selective and careful about how and when they do it. In the picture below, it took this cub half an hour to work her way over to Ronin using various "What dog?" tactics. Finally, just as Ronin decided this little monster wasn't going to bother him, the cub rolled over and grabbed him. The look of disgust in Ronin's face is quite obvious. He would never hurt the bear, but being a police dog, if the bear startles him, he reacts quickly and loudly sending the bear running for cover.



The black you see on Lelani's back is a bear



A break between wrestling matches



Can't resist tormenting Ronin

Later in the rehab process, Ronin becomes something to run from along with any other dog that might happen to come into sight. They will always recognize Lelani as non-threatening, but there is no physical contact with her once another cub arrives.

The cubs are all over Lelani, pulling ears, biting legs or a tail. She is usually gentle with them, but can get rough if the cubs get too obnoxious. Strangely, during the terrible twos even when the cubs are wired up, they are generally gentle with Lelani while Sally gets the hard bites. Lelani has never hurt any of the cubs and they seem to adore her. Once in an outdoor enclosure, Lelani will remain with the single cubs 24 hours a day until another cub arrives. When moved to the main enclosure sometime in June, her service as pseudo bear ends even if another cub hasn't arrived. At this stage, the cub hangs on her hips while playing and that could result in an unintentional injury to her.

December, 2004



## STAGES OF DEVELOPMENT - continued

At about 10 weeks, weather permitting, Sally puts the cubs in an outside enclosure on the deck outside her office during the day. At first the cubs are scared, but they adjust quickly. However, they bawl if left out at night so they spend the nights in the vari-kennel inside. The cage on the deck isn't large enough for Lelani. If it is a single cub in that cage, Sally becomes the substitute sibling when it comes to wrestling. After each feeding, she will let the cub chew and wrestle with her hands. This lasts about 20 minutes and then the cub settles down for a nap. After that the cub plays with logs and in the small water tub and is quite content being alone. If more than one cub, there is no need for Sally to participate in any play sessions. After about a week of being outside during the day, Sally will leave them outside all the time unless it's very cold. At this age, they still bawl if either Lelani or Sally isn't around. During the day, Sally can talk to them from her office and the dog is always nearby. At night, Lelani sleeps beside the deck enclosure and comes in after the bears are asleep. The cubs will then sleep until morning.



First outdoor experience

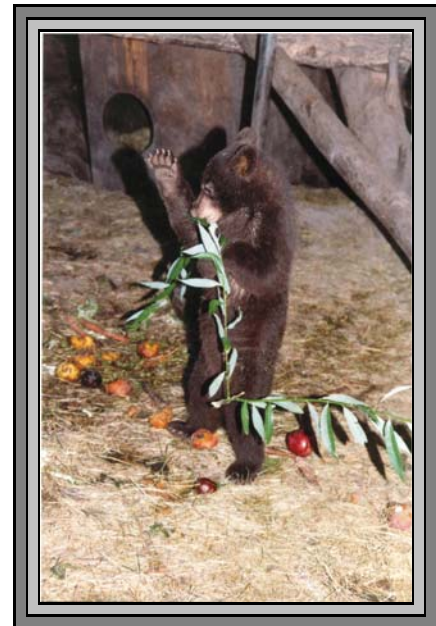
### Teenage months - from four to seven months



Around four months old, for the most part they stop the temper tantrums and focus on just being youngsters. If they get mad, it's usually associated with formula - running out before they are full - not having the right nipple - formula too hot or cold, etc. Sleeping, playing, and eating are what they are all about. Although they play hard and tear around at

top speed, they are much gentler in their play than the previous weeks.

At five months old, the cubs are really roughhousing and need to be moved to the next largest enclosure. We have 3 different enclosures to use but generally it's one of the 10 x 12 or 10 x 20 enclosures. The cubs will be very active at this stage, running and jumping and climbing everything. Climbing chain link is not



December, 2004



## STAGES OF DEVELOPMENT - continued

the same as a tree because it's slick, especially if the cubs are playing in the water tubs. Cubs love the water and from about three months on, they will be in it every chance they get. They have to learn to climb the chain link safely without falling. An interesting tidbit - at about 4 months they start paying attention to their coat. Although they may get dirty, they play in the water and clean up. If formula happens to spill on their fur, unless really hungry, they will sometimes stop nursing and lick the formula off their coat until it's clean.

They are eating more solids now in the form of fresh fruit, apples, peaches, pears, plums, and grapes. Even though you may only see dry dog food scattered around, chances are they are eating some of it. Each cub is different as to when it starts eating dry dog food. If only one cub it may take longer as cubs tend to do what the other cubs are doing. It's always great if one of the cubs starts eating the dry dog food early because you can count on the others following suit. They will also continue to eat most of the canned fruit, oatmeal, cereal, cottage cheese, bread with yogurt, and any soft foods we still offer. Sally provides the solid food twice a day along with formula feedings. The cubs will take about 20oz of formula about every four hours or three times a day.



Tom Robb moves tranquilized cub into main enclosure after health check

At six months old, we move the cubs into the main enclosure. Usually we just coax the cubs into a carrier or we may tranquilize the cubs and do a health check with our vet. It just depends on the situation and the number of cubs we need to move. The main enclosure is very intimidating at first, especially for just one cub. The cubs will inspect every inch of each new enclosure & test it. Once done, they usually won't test it again. At this stage, it's almost like having a teenager around. At times, they don't use good judgement and seem to feel invincible. They get a bit wild and reckless. If

accidents are going to happen, it's probably at this stage. By the end of June or first part of July, the cubs will wean themselves off the bottle. Sally does continue to provide formula once a day in a dish for a week or two after that if the cubs want it.

The bears are quick to lose interest in their foster mom at this point. The days consist of playing, wrestling, chasing, napping, playing in the swim tub, and eating. They become independent of Sally within about two weeks of moving into the main enclosure. Although they will greet Sally and seem glad to see her, she is



December, 2004

## STAGES OF DEVELOPMENT - continued



no longer their security. The enclosure has now taken her place. The cubs feel quite safe since they are aware that no one else comes in and they can't go out. The cubs are far more interested in playing with each other than in spending time with Sally.

The swim tub is a major attraction even during the cooler days in fall. The cubs not only swim and play, but enjoy lunging out of the tub carrying gallons of water with them and racing around the enclosure getting everyone and everything soaking wet. Once in a while they will pull a log into the tub and then spend part of the day dunking it or pushing it around in the tub.

The cubs actually mellow out at this point. The once wired up cubs who could easily swat before you could see it coming, are now even gentler in their actions. They still have that mischievous streak, but by the time they decide to wrap a paw around Sally's leg, she sees it coming and just steps aside. Now and then there will be a bear that has a very determined mind set. Sally had one of those trip her and then sit on her back before she could get up. The cub was just playing, but because Sally knows each bear's personality so intimately and has studied each one, she can avoid any serious problems when this happens. The cubs still respect her as their foster mom and react to her moods. If she is nervous or uneasy, they reflect that. If she is stressed or upset, they react by being very pensive and will sit quietly keeping their movements to a minimum.



This is a time of destruction, mostly during play. Anything is fair game and it seems to be all about moving things around, undoing, ripping apart, turning over, and rearranging everything. The cubs will frequently pick one item and just demolish it. It may be a plastic dog house used as a den or it could be the swim tub, the deck area, or the roof.

### College months - from eight months to release

At eight months, you can breath a sigh of relief. The cubs seem to have made it through the teenage stage. Now it is almost like having a college student around. They take an interest in their surroundings

December, 2004

## STAGES OF DEVELOPMENT - continued

and start to investigate to figure out what makes everything tick. Why exactly does this move the way it does? What is inside this? What happens if I tear this apart? The same behavior at four or five months was just curious play. Now it's as if they are experimenting with different ways to learn. They are



precise in their actions. They are careful and deliberate. They have a purpose and a mind set that wasn't apparent before. Put a cardboard box in with them during the previous stage of development and the bears immediately rip it apart with no thought of anything but playing. Now, they will investigate the box, turning it over, looking for what might be inside before they destroy it. Once they determine there is nothing else to find, they will rip it apart and play with it.

At nine months, their behavior changes dramatically. They start to take notice of everything - sights, smells, sounds, and movement. They are always alert and cautious. There is little that escapes their notice. It's a time for caution and wariness. It's a time to run, to show fear, to

make a hasty retreat. Their wild instincts are maturing and finally the cubs display the very behavior everyone wanted and expected to see all along. As the weather turns colder and hibernation is on their minds, the bears slow down and don't react as quickly as before. They still spook, they still run, woof and clap their lips. However, they are more inclined to stop, intently studying whatever imagined threat is upon them. They appear to use more discretion or judgement as to whether they will continue running.



By the end of November, they are close to hibernation. Everything at this time of year is quieter and so are the bears. There is little activity to spook them. If the weather is cooperative, they easily start the hibernation process in the enclosure. There is every reason to believe their behavior coming out of the den will be just what everyone expects to see in a bear.

It's important also, to remember that cubs take their cue from their mother. If she is relaxed, they aren't

December, 2004



## STAGES OF DEVELOPMENT - continued

going to be frightened and running away. They sense danger and display fear because she alerts them to it. For a period of time at least, cubs in rehab, have the same security or sense of danger, from Sally, from their environment, and from the dominant bear. If someone came by at time when Sally was in the enclosure with the cubs and the dominant bear or Sally remained calm and unconcerned, so did the other cubs. If either acted nervous or uncertain, the cubs mimicked our behavior.

Quite by accident, during a stressful time in Sally's life, she realized the cubs were also reacting to her tensions. Their restless and irritable nature at first baffled her. It continued over a period of three or four weeks. There was no apparent reason for it. Squabbles broke out easily. Before this, the cubs rarely displayed any irritation with each other. Now, they followed Sally around while she cleaned instead of ignoring her as they had previously. As her situation began to ease, so did the tension and so did their behavior. It was clear they sensed



the stress and were reacting to it. It was equally clear they sensed the end of it as well.

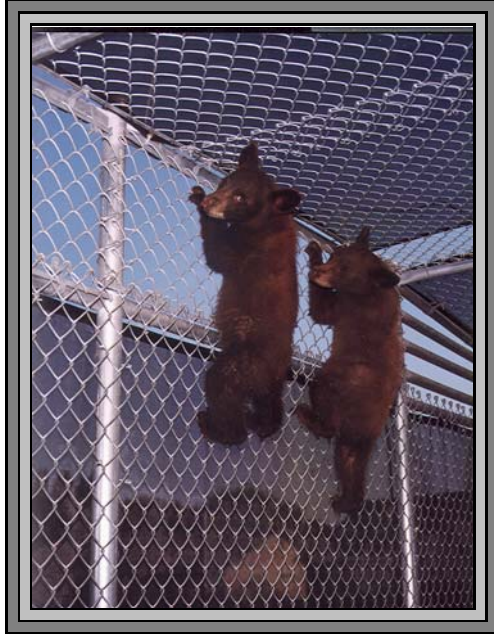
It's very important to allow these cubs to go through the various stages of development. We will see the behavior everyone wants and expects to see when their wild instincts start to mature in late fall. Until then, just let the bear's behavior develop naturally until it's time to den them.

December,



## MATURING OF THE BEARS' WILD INSTINCT

After the first few years, we came to realize some of the behavior we saw late in the year was due to the development or maturing of the cubs' wild instinct. In rehab, we often release at an age that does not permit us to witness the full development of this instinct. On occasion, when wintering through a wild animal, we have the opportunity to see this happen and watch their behavior change accordingly.



This behavior was very first observed when we completed the larger enclosure in 1990. Around the first week of October, their behavior changes dramatically. They spook at everything including us during our normal routine. They run wildly to the other end of the enclosure as if some bizarre event were happening. Only when visual recognition takes place will they settle down.

As we clean, any small noise such as kicking over a bucket or dropping something will cause the same reaction. They startle at anything and everything. They scatter wildly and climb to the top of the enclosure. During the summer, the horses in the pasture next to us would often race around kicking and bucking. The bears stared at them in boredom. In fall, even a whinny would send the cubs up the wire, woofing and clapping their lips.

During this period they remain nervous and restless much of the time. It begins to taper off as the weather changes and they become more lethargic in preparation for hibernation. Some of the behavior is no doubt related to the time of year. However, it is such a dramatic change and duplicates some of what we see in other wildlife as their wild instinct develops.

Their behavior is typical of other wild orphans that arrived late in fall. Cubs that arrived in September would at first woof and threaten. As they adjusted, this behavior stopped. They didn't run or spook constantly. Yet in October, their behavior again changed to match that of the cubs in rehab since spring. We did not see this behavior in previous years. Probably because we kept the cubs in a more isolated, less open area. Although the cubs are born with a wild instinct, as with any behavior, as they age, those instincts develop, mature, and play a more significant part in their day to day lives.

The cubs behavior after coming out of hibernation out will be much the same. They are now in new surroundings and everything seems threatening. By the time they adjust, they will have merged into the population of other bears.



January , 2005

## PREPARATION FOR DENNING AND HIBERNATION

Denning takes place sometime between the end of November and late December. If we go in November, the bears will not be as lethargic and ready for hibernation. Therefore, we try to schedule the release for December. Once we know if we are going to have an early winter or late fall, we start preparing the bears for hibernation.



**Swim tub now becomes a den**

The first step is to decrease the food gradually. Starting in November, we feed once a day in the morning. They still have dry dog food available to them at all times. We continue cleaning twice a day. We keep all other activities to a minimum. As the weather gets colder, the bears first become more active, then start to slow down and become sluggish. They sleep later each morning and retire earlier each evening.

After decreasing the food to once a day, we gradually cut back on the amount of food. When we have an estimated date for denning the bears, we stop feeding during the day and give only a little dog food late at night. Then we stop feeding entirely.

During the final feeding, we clean, make one last check for any weak areas, and repair damage to the dens, etc. This is the last time we will enter the enclosure. From then on, all activity ceases around the bears and we keep stimulation to a minimum. We do sneak in quietly to check on them once they are in hibernation.

Restricting the food supply simulates the situation they face in the wild before hibernation. Lack of food and weather triggers the instinct to hibernate. They become lethargic and eventually den for the winter. Rehab cubs follow a similar pattern when we stop feeding. The first week, the bears remain active during the day and much of the night. Then they sleep all day, but are active at night. We finally figured out the reason for the change in activity from day to night. The last few days before we stop feeding entirely, we gave them only dog food at night. This seemed to cause them to reverse their activity and remain active only at night. Also, they figured out that the coyotes were fed after dark - talk about observant!

They display some low key signs of hunger, but it usually doesn't last long. If we stop feeding 2 weeks before denning, the bears will usually start hibernation in the facility. If we shorten the time, they may become lethargic and less active, but do not hibernate in the enclosure. Weather plays a big part of getting them into hibernation. During winters when the weather was mild, it was increasingly difficult to get them to start hibernation, despite the lack of food. They became aggressive with each other, irritable, frequently getting into spats. In general, we saw aggressive and intolerant behavior rarely witnessed at any other time.

December, 2004

## PREPARATION FOR DENNING AND HIBERNATION - continued

Weather definitely impacts our ability to start them in hibernation. If the weather is not cold enough, it isn't easy to get or keep the cubs in hibernation. They will become active every few days. In 1996 we had 60 degree weather that played havoc with the hibernation process. We stopped feeding a bit earlier that year to take them out earlier. After we stopped feeding the cubs, they were active for about two weeks. When they finally went in, they came out every few days or when any noise roused them. We started the process the first part of November and it wasn't until the end of December the cubs remained in the dens for more than a week.

In the past, they were never aggressive after we stopped feeding. We could still go in the enclosure without risk. However, this time their behavior changed and they were quite aggressive. They lost more weight than they should have even though they were still in good shape for hibernation. During 1998, we faced the same problem. The weather was only cold for a few days at a time with little snowfall. Although the cubs remained lethargic, they were active for an hour or two each day. It was interesting to note that on those days when it was cold or wet and rainy, they stayed in the dens, despite the availability of food. If the weather isn't cooperating, they will remain semi-active. Attempting to force hibernation by cutting off the food supply without the appropriate weather will result in additional weight loss and just doesn't start the hibernation process as we need it to happen.

During the first snow of the year the cubs always come out and see what this new white stuff is on the ground. They play and wrestle and have a great time. After that, they just remain in the dens when it snows. One year we were puzzled that the 6 bears were coming out of the dens for about half an hour each day. Even during snowstorms, they were spotted wandering around the enclosure. All six chose to den together in a four foot square den with a two foot wide by three long entrance area. We can't force the bears to den where we want them to. They will normally all den together or split into small groups. In January, we returned three of the cubs to California. While preparing them for transport it became obvious why they were coming out so frequently. Two of the bears weighed 146 and 173 pounds - add those huge mounds of fur and body mass to the other four bears and they were probably so kinked and hot each day that they had to come out just to unwind and cool off.



Water is still available after we stop feeding. We drain and refill the swim tub. Since it is so large, the water does not freeze solid as it does in the smaller tub. However, we seldom see the bears drinking the water. At this point the cubs usually weigh anywhere between 65 - 100 pounds and are the size of a yearling. (See the same cub above at 5 weeks old on page 9).

December, 2004



# DENNING

Two or three days before we transport the bears, Regional Wildlife Manager, Jeff Rohlman goes in search of dens. Most of the bears are in dens by the time we take the rehab cubs. However, we often have an extra site located in case a wild bear uses one of our den sites. In 1994 we built 3 artificial dens to use. We had so many bears we filled all the natural and artificial dens.



**Jeff Rohlman points out a bear's den & then climbs in one den to show the size**

Capturing the bears for transport is one of the easier parts of the whole procedure. We employ a technique developed for use with coyotes. The cubs (whether in hibernation or still active) are often in the hollow log or one of the dens. We slide the metal carrier up to the entrance and by various means encourage the cubs to enter it. Once in the carrier, we slip a board over the entrance, move the carrier back, and shut the door while pulling the board free. If the cubs are very active, we can coax them into the carrier with grapes, sometimes using additional encouragement in the form of a gentle boost on the rump.



**You aren't coming near me with that needle!**

Using these methods, we don't have to tranquilize the bears until we are at the den site. At times, the number of bears or the deadline we are facing requires us to tranquilize before going to the den sites. The bears seem to instinctively know they want to get as far away from the jab stick with the needle as they can.

At the den site, Wildlife Biologist, John Beecham tranquilizes them using Ketamine and Rompun. We check the teeth, take measurements of the neck and chest, ear tag and sometimes collar the bears. John crawls into the den to clean and prepare it. Squeezing one person and two or three very large cubs into a den can be a real challenge. The tranquilizer will keep the bears out for two or three hours. Pine boughs and snow cover the den entrance.

December, 2004

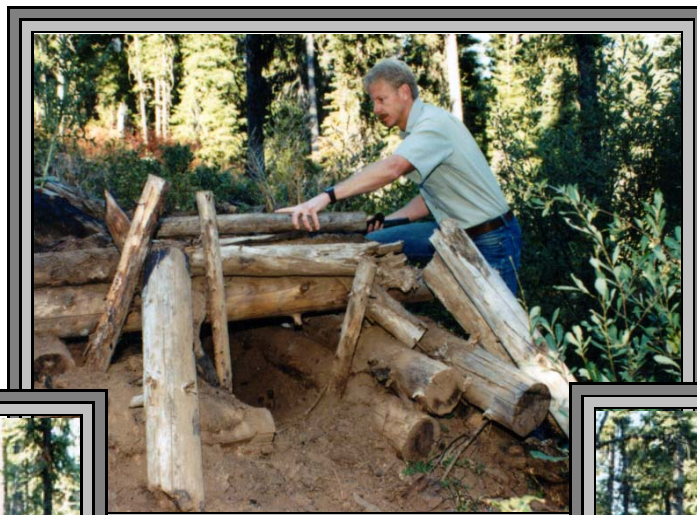


## DENNING - continued

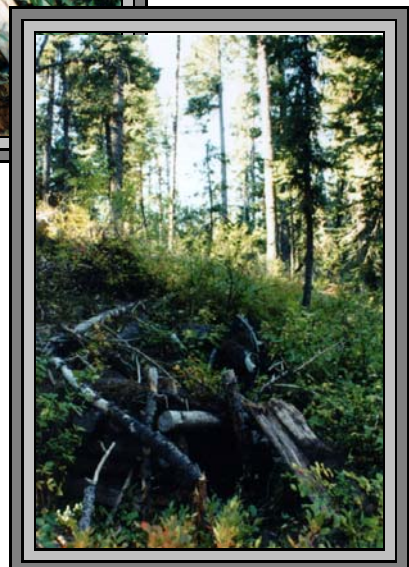
Within a few days, Jeff Rohlman checks the dens again. In some cases the cubs have left to investigate their new world. They may wander a bit and find another den or return later to the same den. Considering their weight, they should come out of hibernation with enough fat reserve to last until food is available. This helps offset the fact they don't have the adult female to help them after hibernation. One cub trapped the following June was within 10 pounds of her weight when denned.

It's our hope the cubs stay in the dens once we place them there. However, there shouldn't be a great deal of concern if they don't. They will move around, investigate their new world, and den again in the same location or another den. In fact, Sally has concluded that it's probably quite natural and helpful if they wander around for a bit. The timing is good - other bears are in hibernation, no people around to bother them, the snow & weather discourage them from traveling long distances. Since we have already started the hibernation process, it's likely they will continue the process within a few days at most.

The rehab cubs are a bit like street wise kids. Once weaned, they become pretty independent (unlike their counterparts in the wild) & have the confidence to back it up. They are used to being on their own. There is no need to confine them to a man-made den. It can prove disastrous. Their instincts when confined will be to get free, whatever it takes. Most will put all efforts into that goal rather than go into hibernation. They are fully capable of finding their own dens if they choose. Since their weight & development are twice that of a cub the same age, they are capable of dealing with other predators once clear of the tranquilizer - probably better than any yearling facing the same predator. Place them in a den (man-made or otherwise) and you have given them the opportunity to use that shelter if they wish, but don't lock them in. Stay around to make sure they are coming out of the tranquilizer if you are concerned, but let them stay or leave as they choose.



**Building the artificial dens**



DEN INTRODUCTIONS & SPRING RELEASES

YEAR	TAG #	SEX	DATE Denned or Spring Release	STAYED IN DEN
1989	SF362	Male	11/15/89	No
1991	EF182	Female	12/15/91	Yes - problem bear - captured 7/92
	SF340	Male	12/19/92	Unknown
	SF341	Female	12/19/92	Unknown *
	SF342	Male	12/19/92	Unknown
	1993	U1334	Male	11/27/93
	U1335	Female	11/27/93	No
	U1336	Female	11/27/93	No
	U1337	Male	11/27/93	No
1994	SF324	Female	12/10/94	No ****
	SF346	Male	12/10/94	No ****
	SF319	Male	12/11/94	Yes ****
	SF321	Female	12/11/94	Yes ****
	SF325	Female	12/11/94	Yes ****
	SF322	Male	12/11/94	Yes ****
	SF344	Male	12/12/94	Yes ****
	SF345	Male	12/12/94	Yes ****
	SF348	Male	12/12/94	Yes
	SF317	Male	12/12/94	Yes ****
	NO TAG	Male	01/05/95	Yes
	NO TAG	Male	01/05/95	Yes
	NO TAG	Female	04/25/95	Yes
	NO TAG	Female	04/25/95	Yes
1996	U1362	Male	2/15/97	No
	U1362	Female	2/15/97	No
	U1363	Female	2/26/97	Uknown **
1997	None			
1998	No tag	Female	12/15/1998	Unknown
	No tag	Female	12/15/1998	Uknown
<p>* Captured 6/26/93 on study area during a population study  ** Captured 7/98 on study area during a population study  **** Bears with radio collars</p>				

DEN INTRODUCTIONS & SPRING RELEASES - continued

YEAR	TAG #	SEX Weight on Release	DATE DENNED Spring Release	STAYED IN DEN
1998	NONE	Female	12/15/1999	Unknown
	NONE	Female	12/15/1999	Unknown
	1403	Male	05/16/1999	NA - Shot in Hunting season 10/8/00
	1404	Female	05/16/1999	NA - Shot in Hunting season 8/31/00
	1408	Male	05/16/1999	NA
	1400	Male	05/16/1999	NA - Shot in hunting season 4/23/00
	1401	Female	05/16/1999	NA ****
	1407	Female	05/16/1999	NA - Shot in hunting season 5/8/01
	1406	Male	05/16/1999	NA
	1402	Female	05/16/1999	NA ****
1999	1409	Male	12/11/1999	Yes ****
	1405	Male	12/11/1999	Yes ****
	1414	Female	12/11/1999	Yes ****
	Not available	Male	12/10/1999	Unknown ****
	Not available	Male	12/10/1999	Unknown - **** - Shot in OR June 2001
	Not available	Female	12/10/1999	Unknown - ****
2000	U1415 & U1416	Female - 90 lbs	12/02/2000	Yes ****
	U1420	Female - 82 lbs	12/02/2000	Yes **** - Shot by hunter in OR Sep 2001
	Not available	Female - 110 lbs	12/12/2000	Unknown
	Not available	Female - 106 lbs	12/12/2000	Unknown
	Not available	Female - 120 lbs	12/12/2000	Unknown
	Not available	Female - 90.4 lbs	12/12/2000	Unknown
	U1422	Female - 66.7 lbs	12/16/2000	Yes **** - Killed by bear in spring 2001
	U1418	Male - 95.6 lbs	12/16/2000	Yes ****
	U1419	Male - 83.6 lbs	12/16/2000	Yes ****
	U1417	Female - 79.1 lbs	12/16/2000	Yes **** Hunting season OR 9/2/01
	Not available	Female - 90.4 lbs	02/15/2001	Unknown
	U1426	Male - 115 lbs	05/17/2001	NA **** Hunting season - Fall Creek area 4/29/04
	U1427	Male - 106 lbs	05/17/2001	NA **** Hunting season 8/30/03
	U1429	Male - 147 lbs	05/17/2001	NA ****
	U1425	Male - 114 lbs	05/17/2001	NA **** Shot 6/16/04 while trying to get into rabbit hutch
	U1411	Male - 126 lbs	05/17/2001	NA **** - Hunting season 9/13/01
	U1434	Male - 101 lbs	05/18/2001	NA ****
	U1436	Male - 130 lbs	05/18/2001	NA ****
	U1433	Male - 120 lbs	05/18/2001	NA ****
	U1431	Female - 101 lbs	05/17/2001	NA ****
U1428	Female - 82 lbs	05/17/2001	NA ****	
2001	U1430	Female - 93 lbs	05/17/2001	NA **** (2000 cub arrived 1/01)
	Out of state	Male - 173 lbs	06/05/2002	NA
	Out of state	Male - 167 lbs	06/05/2002	NA - Killed by car 2003
<p>We received a donation from Cumberland Elementary School in Lafayette, IN for a bear scale - bears from 2000 on will show weights for the release date</p> <p>**** Bears with radio collars</p>				

December, 2004





## TRIP TO THE DENS



Arriving at the mountain location



John tranquilizes the cub



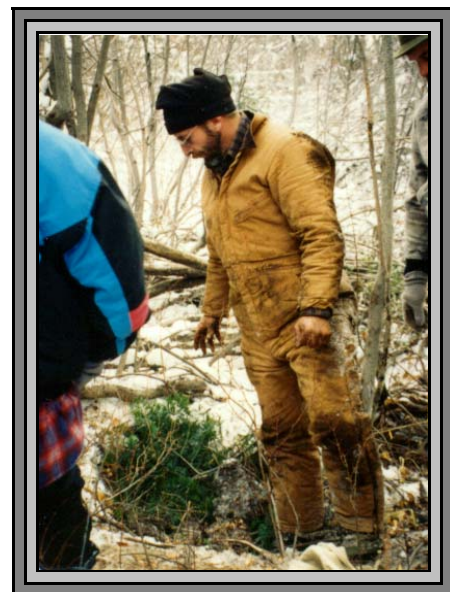
Checking the teeth



Putting on the ear tags



Fitting the radio collars



Closing up the den

December, 2005

# MAY 1999 SPRING RELEASE

Jeff Rohlman prepares the tranquilizer



Lloyd Markus & Tom Robb bring out the first of 9 bears being released



Lloyd Markus & Victor Watkins help as Jeff Rohlman puts the radio collar on the bear



Takes 2 to lift this bear - Chris Isaacs & Sally Maughan take measurements



John Beecham & Victor Watkins (WSPA) check on two of the cubs during a break on the way to the release site



Arriving at the release site



MAY 1999 SPRING RELEASE - CONTINUED





May 1999 SPRING RELEASE - continued



December, 2004



## SPRING RELEASE OR WINTER DENNING

Due to circumstances beyond our control, for the first time in 1999 we released nine cubs late in May instead of denning them in December. With this release, we were able to observe their behavior right after release. It was both worrisome and exciting. Two at a time, the cubs leaped from the carriers and darted out into the onion beds. They climbed the trees, browsed in the onion bed, and investigated their new world. After about 20 minutes, one of the cubs slowly wandered up the slope into the woods. Within a few minutes, one by one or in groups of 2-3, the rest followed. It was quite exciting to see nine bears at the top of the hill, all heading in the same direction. The timing was a concern for all of us, especially since the Memorial weekend loomed just around the corner. With holiday visitors going to the mountains for a long weekend, the opportunity for the newly released bears to become a nuisance bear was in the making. However, not one of the cubs put in an appearance or caused any problems.

During the fall and winter of 2000, we received 11 cubs that were very underweight. It was a difficult year for bears due to the fires and droughts earlier in the year. The cubs didn't have sufficient weight to survive hibernation by Dec. when we normally returned them to mountain dens. We continued to feed them until the middle of Feb. when the cubs voluntarily went into semi-hibernation. Even with food available, most of the cubs remained in the dens for the next 3 weeks until the warmer weather of March brought them out. Two or three came out once a day to munch on some of the food and immediately returned to the dens. Even though we aren't out there all the time, the decrease in the amount of food taken and scat tells us how active the bears were on any given day.

The weather and our schedules didn't permit us to den them in the mountains in February after they started hibernation in the enclosure. Also, John Beecham wanted to radio collar some spring releases again to compare with those bears denning in December. After hunting season ended the middle of May, we released the 11 bears over a two day period. Most of the bears behaved in exactly the same way as those the year before. On the first release day, the bears spent time checking out the area before disappearing into the woods. On the second day, the bears jumped out of the carriers and tore off at full speed, completely out of sight in seconds. I think the activities of the previous day, the obviously missing bears from the group, and the fact there were fewer bears on the second day all contributed to the difference in behavior. I doubt they were as secure with what was happening as the bears the previous day.



Actor & singer David Soul carries Pele to the den site

December, 2004

## SPRING RELEASE OR WINTER DENNING - continued

Comments by Sally Maughan

The question is, why does a spring release work? Why don't the bears released in May become problem bears? The temptations are certainly there - people - easy food - plentiful opportunities. I'm certainly not an expert in the behaviors of bears in the wild. Nor am I a biologist or scientist. However, I have lived with all these bears 24 hours a day since 1989. I know what it is to be a cub for the first year of it's life in a way few others do. I know the behaviors, the stages of development, the various personalities, the inter-actions between each bear, what to expect, and when to expect it. I have a relationship of sorts with each bear and with the group as a whole. From that experience, I can come to some conclusions. They won't be scientific and probably abstract at best, but viable none the less.

Once the cubs wean themselves, they basically become independent at that time. They are left on their own much of the remaining time in rehab. Their development by December, both physical and mental is almost double that of a cub the same age still with it's mother. They have an attitude of confidence and independence that you wouldn't see in a cub still with it's mother. I would equate them with 18 month old yearlings at that time. Their weights vary between 60 to 120 pounds, depending on male or female. Although much heavier than their counterparts in the wild, their frame and physical development is also doubled. They are much more self assured and capable of taking care of themselves.

When released in May, the bears are probably still 6 months ahead of their counterparts in the wild. They bring with them a self assurance and maturity that other cubs don't have yet. They have been on their own without a mother for many months and adjusted to that long ago. Furthermore, their weight provides them with additional fat to live off of while finding their way in this new world. Perhaps their condition affords them the luxury of foraging for food without resorting in desperation to easy food sources such as campgrounds or residential areas. Still, food is the main focus of a bear's life. Since they've had food provided to them for months, why aren't they taking advantage of easy food opportunities? Why aren't they showing up in campgrounds? Why aren't they approaching people for food?

Biologists will probably laugh and others will probably shake their heads in disbelief at this abstract thought. However, experienced wildlife rehabilitators will no doubt understand what I'm saying. I believe it is part of the equation that keeps these cubs from become problem bears. We all remember our first time leaving home and living on our own. Cardboard boxes for furniture, small apartments, and scrambling to make enough money to pay all the bills (as if that's changed). Yet, most of us would never have considered going back home. Home was great, but this was freedom. As bad as it might have been at times, we were free to live our own lives - no one telling us what to do or when to do it. We set the rules, we made our own way. For the bears, I believe it's similar to that experience. Being in rehab with all the food you wanted, protection from the outside world, with a life of playing and sleeping is great. But at some point the desire for freedom from the chain link enclosure is stronger than any other need. Once released, they had trees 40' high to climb, new and tasty vegetation to eat, and miles and miles of area to roam. The stimulation of the new environment most certainly plays a part in all this. Yes, they had dangers like bigger bears, hunters, droughts, fires, starvation. Although our own first steps into freedom probably weren't life threatening, they were challenging.

December, 2004

## DO REHAB CUBS BECOME PROBLEM BEARS?

Of all the cubs released to date, only three became problem bears and one of those was questionable. One female was a single cub, orphaned during hunting season. After release we know she excavated the den, enlarged it, and remained there until spring. She wandered into a forest service camp and the people there began feeding her. They knew better, but wanted to keep her there as a sort of camp pet for their amusement. As a result she began to pester humans for food when they left. Jeff Rohlman trapped and moved her twice. The third time he relocated her deep into Hell's Canyon. Not long after her arrival, she found the only person in the area. For the last time he trapped her and we transported her to Charlie Robbins at Washington State University. The University then sent her to Bear Country USA temporarily. Although she was supposed to return to the University, we were not able to find out what happened to her after that.

This was a particularly difficult situation for us as it was only our second cub. We work hard to insure a successful release. When something goes wrong, we need to determine the cause to change the outcome if those same circumstances come together again. After reviewing notes on that cub and the previous cub, we determined the circumstances we felt caused her to become a problem. To this day, she remains only one of three cubs to cause a problem.

- 1) She was a single cub.
- 2) People gave her food shortly after leaving the den. Worst of all, people who knew better put this cub at risk with no thought of the ramifications to her by feeding her daily at their camp
- 3) Her personality was different from any bears before or since. She was hyper-active and seldom still for more than a few minutes. She was very outgoing and aggressively interested in anything going on around her.
- 4) She never displayed the behavior other cubs did as their wild instincts developed.

In May, 2000 we released 11 bears that arrived the previous fall. They didn't have sufficient weight to survive hibernation so we held until spring. One of the male yearlings discovered a rabbit hutch while passing by a mountain home. Rabbits are a natural food source for a bear and he attempted to get into the hutch. Since the bear was after food, that in itself wasn't surprising, but he wasn't easily discouraged. Before we had a chance to relocate him, the homeowners shot him. This bear's personality also played a large part in the problem. He was always the first one to do something or go somewhere in the enclosure - the leader of the pack. If he did it, the others were more likely to follow, but while they remained extremely cautious he was bold and continued to focus on whatever held his interest. He could be discouraged and sent running, but it took more effort than with the other bears. Knowing his personality, it's likely the various methods used today to haze a bear would have been successful in sending him on his way permanently. Once again, personality played a part in this bear's becoming a problem. Since we didn't have the opportunity to relocate this bear, we will never know if it was an isolated incident or if the behavior would have continued to get him in trouble.



Going home

In 2002 we released a cub who had a very extreme personality. He was a very needy bear & whatever happened that made him an orphaned seemed to rob him of any sense of security. He was always

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## DO REHAB CUBS BECOME PROBLEM BEARS - continued?

demanding, always angry, always insecure, always on the offensive. When released, Sally felt he would either become the ruler of his territory or a problem bear. Unfortunately, he chose the latter course. At first he just chased livestock or anything that would run. He never tried to catch them, just chased them. Knowing his personality, it was probably fun and games to amuse himself. Jeff Rohlman trapped and relocated him. Despite the distance Jeff took him, he was back in no time. Then he began sitting on house porches staring in the windows. He never made any attempts to get in, but for those people inside, it was unnerving to say the least. Somewhat like watching a stalker doing nothing while you are waiting for him to make a move. When this behavior started, Jeff captured him again and this time we had no choice but to euthanize the bear.

One 1994 cub made an appearance in a populated area. He might have moved on of his own accord. However, with holiday crowds coming, Fish & Game moved him before he had a chance to move on of his own accord. There have been no further problems involving this cub.



A second chance

After the first problem bear, Sally made the painful decision that if we can not release a rehab cub or one becomes a problem after release, we will no longer place the bear in a captive facility. Even the best scenario for captive bears can change. Zoos and wildlife parks can trade or sell the bear, who might then end up in a roadside zoo or game farm. Our policy is not to place bears at risk of ending up in such a situation. In wildlife rehab many animals are not candidates for release even if they recover from their

Having a single cub is a disadvantage. That alone does not cause a nuisance bear, but it doesn't help, especially when combined with one or both of the other circumstances. We feel the outcome might have been different for all 3 bears had either of the other two conditions been different. The fact that the rest of the rehab cubs have not become problem bears supports that theory.



A new life of freedom

December, 2004



## DO REHAB CUBS BECOME PROBLEM BEARS - continued?

from their injuries. An amputated wing means an eagle can't fly. Very few wild animals are happy or content in captivity. It is cruel to think we are helping them when the reality is we are just making prisoners of them. Sally said it was a hard lesson to learn in her early rehab days. She had to recognize that sometimes euthanizing the animal was far kinder than "caring" for it by keeping it caged for life.

When it comes to the orphaned cubs, Sally also understands and shares the spirit of this beautiful creature. Caging a bear for life, even under the most ideal conditions is unacceptable to her. In many cases, ideal conditions never last. Bears need to be free and living in their own habitat, not one we try to simulate for them. Certainly there is a purpose and place for wildlife parks and zoos. How else would we learn and understand or teach our kids to appreciate and understand some of these animals. There is also a place for the rare animal or bird who can't be released and is happy in captivity. Wildlife education programs are invaluable and for those animals that qualify, it also gives them a purpose in life.



John Beecham & veterinarian Tim Murphy fit the radio collar as we prepare for a for a release

place for them to live out their lives. Knowing the spirit of these bears, Sally questions whether they would be happy in even the most ideal facility.

It is a hard decision for everyone involved, not one made lightly, and one that remains with all of us from that time forward. Perhaps in a way it makes us work even harder to be sure every cub is a successful release. Comparing the number of successful releases with the three that didn't work out, the odds are overwhelmingly in favor of rehab cubs not becoming problem bears.

However, Sally feels very strongly that it is not our place to gamble with the lives of these cubs. We can't guarantee a captive situation (even if we held them ourselves) would provide them with an ideal or even satisfactory

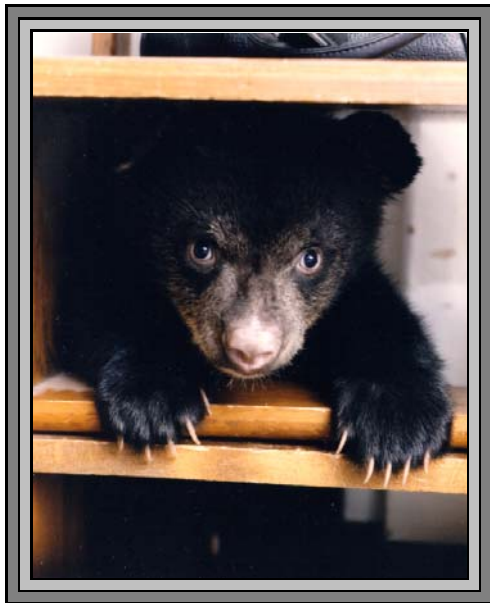


December, 2004

## TETANUS OR SOMETHING ELSE?

In 1993, a female cub 5 ½ months old died suddenly. In 1994, a male cub also died with the same symptoms. We have been trying to establish the cause of death since then. By sharing this information here, it is our hope that someone working with bears will give us a lead that will finally identify the cause for certain.

The female weighed about 20-25 pounds. She had a small build, was in good health, and there were no visible signs of injuries. She was still taking some formula, but eating a normal amount of fruit and dog food. The symptoms developed on a Tuesday morning: slight swelling around both eyes, obvious trouble swallowing, running wildly around the enclosure, hanging upside down from the roof. By that evening she was unable to swallow or eat. She would not open her jaws at all. The swelling around her eyes increased and saliva collected around the outer jaws. She moved normally, eyes blinked normally, normal bowel movements, and no signs of paralysis elsewhere. Wednesday morning she was much worse. She started having slight seizures which lasted up to 30 seconds. The seizures continued into Thursday with the cub sometimes comatose. She died that afternoon.



The male was 6 ½ months old and weighed approximately 35-40 pounds. He had a larger build, same good health, no visible injuries. This cub was not taking any formula, eating normally, normal bowel movements, and active. There was no indication of any problem. However, on Saturday morning there was an almost undetectable swelling around his right eye. He also seemed to have some slight difficulty in swallowing and chewing. He drank water without a problem. Sunday morning he would not open his jaws, still could blink normally, and showed no paralysis elsewhere. The swelling increased around both eyes, but there were no seizures. This cub died the next Friday despite intense medication and monitoring at the clinic.

The female who died the previous year had a small quarter size bump on the right jaw, probably from wrestling with the other cubs. There was no pus or open wound and the bump disappeared about two weeks before the other symptoms began. No injuries of any kind were found on the male cub.

Both cubs were treated by Dr. C. Leon Johnson at the enclosure and his clinic. Both received penicillin and tetanus antitoxin. We hospitalized the male cub almost immediately. He was tranquilized and fed with a stomach tube. This is probably why he lasted longer than the female. Only the jaw muscles were tetanic, but the tongue was paralyzed. Not long after the symptoms appeared, both had difficulty breathing.

We gave the 1996 cubs tetanus shots. Originally, the discussion centered around shots every three weeks. Instead, we gave them one shot, 750 units per cub. No cubs died during 1996. During 1998 we gave the spring cubs the same dosage. Since symptoms appeared in the summer months, we did not give shots to the fall cubs. None of the bears showed any signs of tetanus. Although it will take several years to determine if it is tetanus and if the antitoxin works, it is a step in the right direction. If anyone working with bears has further information, please contact us.

**UPDATE:** As of December 2004, we have not lost another cub to this problem. We are convinced it was tetanus and continue to give shots to all cubs arriving through August.

January , 2005

## TETANUS - CONTINUED

Although I don't have a medical background and prefer to leave that part of wildlife rehab to the veterinarian, I did suspect tetanus. When the cubs died, we turned them over to the state lab. Despite a thorough investigation, the lab could not definitely say the cause of death was tetanus. The preliminary necropsy report for the male cub reads as follows:

*Male bear carcass in good condition with no wounds of integument or oral cavity. An intravenous catheter was in place as was a gastric tube for feeding. No gross lesions were apparent in any organ, muscle, bone, or skin. The stomach was empty. Examinations will include bacteriology on CSF and histology on tissues including spinal cord and brain.*

*Idaho Fish and Game has examined the brain for rabies. Some brain pieces were frozen. Liver, kidney, stomach contents, lung, spleen, and heart blood were also taken for study by Idaho Fish and Game.*

*Microscopic examinations and bacterial culturing did not account for death and the described illness. Though tetanus is still suspected based on behavioral observations, a wound, even around the teeth, could not be found. Small punctures could have been present, and perhaps even detected if the entire carcass had been diced. Extensive palpation did not reveal any sign of inflammation that might have been produced by a puncture, small cut or torn claw, etc. According to experts, a wound may not be present by the time signs of tetanus distress occur. "Local" tetanus results in muscle spasm near the original wound site (which may have healed). So a healed wound in the mouth might result in lock jaw only and all other muscles would work well. Tooth abscess is the most common cause in humans.*

The diagnosis was cause of death unknown, with tetanus suspected. Rabies and other possibilities were eliminated. We suspected tetanus with both cubs. A neurologist advised us that tetanus in children often centers in the teeth and jaw if they are teething. The symptoms can be misleading in such cases. So, is it tetanus? We continue to give tetanus shots each year on all spring arrivals. Since both cases happened before September, we felt the fall arrivals were probably not at risk.

Because no wounds were found that might have been the cause, we have also taken steps to offset two other possible causes - the drinking water and the fruit. Despite our best efforts, the drinking tub water often became as dirty as the swim tub water. We could change it five times a day and at some point they would still be drinking dirty water. Nothing we did was successful in keeping the drinking water clean. With the new enclosure, we are able to have continual running water for most of the day. The water runs in a light stream from the top of the enclosure to the swim tub below. An equal amount of water runs out at the bottom and into the pasture to water the nearby trees and bushes. In this way, the swim tub stays fairly clean despite heavy use and the bears can either drink that water or the water from the stream.

The donated fruit sometimes has a fungus on it. We cleaned it as best we could, but some fungus no doubt managed to find its way into their diet. Ideally, we would like only the freshest fruit, but when you depend on donations, things aren't ideal at times. Considering the foraging bears do, you wouldn't think a little fungus on the fruit would not be a problem. However, despite the need for the fruit, we no longer feed out any fruit with fungus. If there is fungus, the fruit is tossed out rather than take a chance. Since no bears have died since we've taken these steps, I think we've eliminated the cause of the problem. If not, the tetanus shots continue to afford protection for the cubs.

December, 2004



# INJURIES AND ILLNESS

Most of the cubs are fairly healthy when they arrive. A few worms, mites, and ticks are common. Injuries are rare. Starvation is the most frequent cause of problems in fall arrivals. However, on occasion we've had serious injuries or illness that caused death. The tetanus question discussed previously seems to be a thing of the past.



We have had very little problems with parasites or health issues. During 1998, we had our first experience with a nasty little critter called the Uрсicoptic mite which caused the bears to lose or rub their fur off. Charlie Robbins at Washington State University alerted us to this pesky nuisance and John Beecham shared his experiences involving this mite and bears in the wild. The cubs start rubbing off the fur on the rump, then the stomach, and eventually all over until they are left with the undercoat or patches of fur here and there. Based on

their previous experience with this mite, we learned it doesn't produce mange in the classical sense. It is present on bears all the time and surfaces in the fall or winter months in younger bears if they aren't in full hibernation. A biopsy will show some skin inflammation, but the skin remains healthy otherwise. By fall of the next year, the effects on the cubs will be minimal compared to what we experienced the first year. They will grow healthy new coats in the spring. By 3 years of age, they develop an immunity to the mites. In the meantime, they look horrible, but the bears are healthy. There can also be some fur loss from being too hot. Bears will den together and if it gets too warm they can lose the long hairs and end up the woolly undercoat - the Mohawk look as we call it. In spring their coat returns to it's shiny and silky appearance.



We treated with Ivomec for cattle and swine (1 ml or cc per 110 pounds). Normally, given as an injection, we used it both orally and as injections depending on the situation. A little bread coated with Ivomec and honey or a muffin laced with Ivomec did the trick. A shot is probably more effective. If that's not possible or too stressful on the cubs, the oral dose works if you are careful not to give less than the required dose. In fact, a bit more wouldn't hurt. We repeated it every 3-4 weeks. It will kill the adult mite. We start the cubs on Ivomec at about 4 months old and continue it until hibernation. Coming out of hibernation they might show slight signs of some fur loss, but it is minimum. If they aren't fully in hibernation and are active at all, we will continue the Ivomec dosage.



Getting weighed on our bear scale - one at a time please.

We had one cub fall and break her neck. It wasn't a case of a long fall, just landing wrong. We suspect she had been playing in the water and jumped on the logs, which were then wet and slick. It was a freak accident that you wouldn't expect to happen very often, if at all.

One male cub, hit by a car, had a broken hind leg that had already healed by the time it arrived. The vet decided after seeing the x-rays, that it was pointless to break it again as the bone had healed fairly straight. However, the bear refused to use the leg most of the time. There was also some concern that this bear was partially blind. When it was discovered there was additional bone infection in the broken leg and we determined the bear had limited sight, we euthanized the cub.

December, 2004

## INJURIES AND ILLNESS - continued

Two males died of quick pneumonia. One arrived in July with no symptoms or signs of any problems. We spent all day one Sunday shortly after his arrival working on replacing the swim tub. During that time, we videotaped much of the bears activities that day. On Tuesday, we found the cub dead. There were no signs of fever, runny nose, diarrhea, or loss of appetite. When we reviewed the video, all we saw was a bear playing, eating, acting completely normal. The other male arrived in Dec. Due to the conditions, any cubs arriving during winter months are obvious candidates for pneumonia. We started him on antibiotic, but his body just shut down and wasn't able to fight it off. He died shortly after arrival.

In the fall of 2002 a cub arrived that had been sitting up in the top of a tree for days. He appeared to have a slight limp now and then, but otherwise was healthy. He was a very shy cub and stayed out of sight and in the dens whenever we were around.

Although he didn't have enough weight to hibernate, he did remain in the den with the other cubs most of the day. In March when the cubs (now yearlings) became active, we noticed he had a strange sort of walk. It was almost like he was a little tipsy - stepping too high and his hind leg swinging outward a bit. Just when we called the vet to come and check him out, he took off running and there didn't seem to be a thing wrong with him. A few days later we watched as he climbed to the roof over the den area. It was obvious he was using his front paws to pull himself up the wooden poles rather than boosting himself with his rear legs. We also noticed he never jumped down off anything. Instead he would slowly maneuver his way down. As he spent more time out of the den, we were able to observe him more each day and decided there was definitely a problem. Our veterinarian, Dr. Tim Murphy and John



Portable X-Ray - getting X-Rays of the hips



Injured yearling is bear without the white markings

Beecham both came over to do a visual exam. Several days later Dr. Murphy brought over a portable X-Ray machine and took X-Rays. The yearling had a cracked hip in two places which was completely healed. However, it left him with his odd gate and an unwillingness to put pressure on his hindquarters. That caused concern for us when it came to releasing him and being able to climbing trees.

After a lot of soul searching, consulting with John Beecham and Dr. Murphy, Sally made the decision to give him a chance at release. We would have a radio collar on him and could go back in to trap him if problems arose. On the day of the release, he jumped down from the truck bed and walked over

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## INJURIES AND ILLNESS - continued

to the nearest tree. His buddy was already about 30' up sitting on a branch and he started climbing up towards him. After about 7', he apparently decided that was pointless as the other bear was sitting on the only available branch. Instead he slowly came down and walked off into the woods with his shuffling gate. Amazingly, the one bear we worried about most is the one that traveled the farthest distance after release. Four weeks later, we picked up his radio signal approximately 3 hours from the release site (about 75 air miles). Unfortunately, this yearling was shot during hunting season that fall. We were able to identify him when the hunter called in the ear tag number. The Fish and Game Reservist manning the check station was also familiar with our program and took note of the bear's condition. He had one broken toe, but otherwise was in good condition and did not appear to be thin or underweight. He weighed 101 when released so that was good news at least. Did we make the right decision in releasing him? How much of a struggle was it for him with the healed injury? Hard to say except that he had several months of freedom and considering his condition when shot, there is reason to believe he would have continued to do just fine.

Another injured cub arrived in the fall of 2000 that was limping and not using his front paw. At first it appeared to be just a wound on the paw. However, after letting him get settled, we had Dr. Murphy come out. We discovered what appeared to be a bullet hole in his shoulder. Dr. Murphy tranquilized the cub and pulled out some of the infected bone chips. We treated the wound with antibiotic and then oral antibiotic after that. Although the shoulder had an obvious dent in it, once the wound healed the bear never limped or had any trouble running or climbing. We released him with the other cubs the following spring.



Yearling shot in shoulder - now healed  
Ready for release

In July 2004 a 6 month old female arrived who had been hit by a car. She had a dislocated hip, shattered front leg, and lesions on the inside of her other hind leg. She arrived at the Animal Emergency Clinic after a kind passerby spotted her on a dark mountain pass about midnight as he was heading home. He called 911 and together he & the police transported the cub the Emergency Clinic. They operated on her the next day using x-rays of the good leg to rebuild the shattered leg. They stitched up the lesions

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## INJURIES AND ILLNESS - continued

on the hind leg and put the dislocated hip back in place. The following day we brought her home to recover. We kept her confined in a 5' enclosure as the surgeon instructed. That lasted about 3 days and we were forced to move her to avoid further injury as she pulled at the wire and declared her total dislike of being confined to such a small area. Once moved, she settled in a hollow log with food and water nearby and did just what we wanted - stayed calm and didn't move around a lot.

After 8 weeks when we took out the stitches we discovered the hip had dislocated again. This was actually the third time as it happened at the clinic too. The surgeon who operated said that can frequently happen in dogs. Sometimes they go for years before it's discovered.



They don't seem to be impaired and there is no indication of pain. Hard to believe - a dislocated hip sounds very painful. Yet this cub never limped during the time prior to discovering it was dislocated again. In fact, several times she took off running at full speed so it was very surprising to hear it was out again. At this point the surgeon said there is nothing more to do, but let her continue healing. We added our milk formula to her diet immediately even though she was probably weaned. The formula has proven itself time and again in helping starved and injured cubs heal quicker.

We moved her in with the other cubs during September when we knew the broken bones had healed sufficiently to tolerate the rough wrestling that is part of being a bear cub. As of this date she is eating fine and using the front paw. There is a slight drag at times and she probably won't have full movement of the front leg, but enough that it shouldn't impair her movements. We'll just have to see how she does over the months to come. Due to the likelihood of some arthritis in that front leg, we decided to winter her through here. Assuming all goes well, if we can releasing in spring it will mean one less problem with the arthritis and cold weather as she adjusts to being free again.

Overall, bears have proven they are quite amazing at healing themselves and recovering from injuries or starvation. There is rarely a reason why an injured cub or orphaned cub who is underweight shouldn't be given a chance to recover. They are so resilient and given the time, nutrition, and a little extra help, they will often bounce back quickly.

December, 2004

# SUMMARY

## IS REHAB SUCCESSFUL WITH ORPHANED CUBS?

The question is, can we successfully rehab orphaned bear cubs? The answer is yes, we can. How do we know it's successful if we don't track all of them? First we analyze the pre-release criteria that predicts a successful release.

Health  
Development of Wild Instincts  
Survival Capabilities  
Overall Condition  
Mental and Physical Development  
Release Site

Growth  
Fat Reserves  
Behavior  
Weight  
Imprinting  
Personality

The release site is crucial, but still only one of the deciding factors in a successful release. Allowing time for their wild instinct to develop is also crucial. Outside influences, like people and their behavior towards the cubs can combine with other factors to determine the outcome. We have the data for those bears wearing radio collars. Then we look at past releases to determine how many became nuisance bears or how many survived or were known to have died. Unless they became problem bears or died within a short time, they are considered successful releases.

Can the cubs survive until food is plentiful? Their weight at denning ranges between 70 - 100 pounds at least - record weight at release was 173 with a California bear. They have more than enough fat reserves to get through hibernation. It is doubtful they will succumb to starvation in the spring. Their weight will exceed that of other cubs still with the female. If starvation is a threat, other cubs would be more at risk. Hunting season, poaching, and falling prey to other bears is a concern, but does not determine



a successful release unless they the rehab cubs fall victim consistently. That would indicate they are not doing very well at surviving on their own. However, to date none of those things have happened. Those are threats all cubs face, even with an adult female to protect them. There is no indication orphaned cubs are at greater risk from hunting pressures than other bears. These cubs do not make themselves easy targets.



Those denned in 1994 and tracked in 1995 proved even further that rehab is successful. The cub released in 1996 and trapped during the 1997 population study, evaded the traps for five days before getting caught. He was identified from the number on the ear tag and released after getting data for the study. From a biologist and wildlife managers' viewpoint, a successful release means a bear that survives and does not become a nuisance. Factors such as human population, bear density, man-bear encounters, food supply, and public willingness to co-exist, all affect the outcome. Those factors and the bear itself, determines if rehab with orphaned cubs will be successful in your area. In Idaho and other Western states which we rehab for, the program works and we will continue to rehab orphaned cubs and share the knowledge gained with others.

As funds permit, we will track all the cubs after a release. Although John Beecham long ago proved orphaned cubs released back into the wild do just fine, we will continue to update that information. The rehab cubs we captured during population studies in years following their release indicate they are taking their place in the population.

January , 2005

## FOR THE BEARS

The goal of the Idaho Black Bear Rehab program is to save orphaned cubs whenever possible. It is not our goal to place them in zoos or wildlife parks, but to release them into a suitable bear habitat. Bears are inherently shy animals and except for family groups, are solitary for most of the year. Many behaviors they need to survive in the wild are instinctive and we do not need to teach them to be bears. As a result, bears are particularly good candidates for rehabilitation. To help accomplish our goal, IBBR has strived since 1989 to establish and maintain good working relationships with wildlife agencies. The public can help orphaned cubs by understanding the options available to their wildlife agencies and what options they normally use to resolve orphaned cub situations. Take an interest in bear management practices and learn what the wildlife agency in your state and other states do with the orphaned cubs.

### Key elements for a successful reintroduction into the wild:

- 1) Adequate high quality habitat
- 2) Minimum contact with humans for 7-10 days post release
- 3) An opportunity to socialize with other bear cubs during early development
- 4) Individual personalities

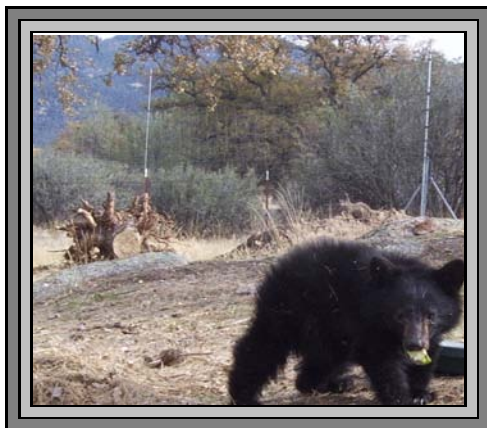
Rehab cubs rarely, if ever starve to death after release; they are not all shot during hunting seasons; they definitely do not all become problem bears. In reality, the majority simply merge into the population and face the same survival risks as any other bear.

### When reports come to wildlife agencies on an orphaned cub, they have four options:

- 1) Rehabilitation and release
- 2) Placement in a permanent facility
- 3) Humanely euthanize the cub
- 4) Do nothing - probably resulting in the death of the cub from starvation or predation

State and federal wildlife agencies focus on managing populations, not individuals. They do not have the people, facilities, or funding to handle individual animals requiring rehabilitation. Wildlife rehabilitators are a volunteer arm of the wildlife agencies. They

provide a very valuable service to wildlife agencies, communities, and people concerned about the welfare of orphaned or injured bear cubs. They willingly accept responsibility for the work, time, day to day care, medical treatment, and expenses associated with helping orphaned and injured wildlife. That makes wildlife rehabilitators and wildlife agencies a perfect team. Rehabilitators manage individual animals in need of short term care and wildlife agencies manage populations for long term viability.



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## FOR THE BEARS - continued

**What any wildlife agency does with orphaned cubs can depend on many factors:**

- 1) Do they have a wildlife rehabilitator with the facility and capability to rehabilitate bears successfully?
- 2) Does the community support bear rehabilitation, both financially and in practice?
- 3) Do agency policies support or allow bear rehabilitation?
- 4) Do agencies consider cub rehab an option in their bear management plan?
- 5) Is the agency aware of existing data demonstrating successful rehab techniques for bear cubs?
- 6) Are suitable release locations available?
- 7) Is the criteria for placing a cub in rehab so restrictive that cubs rarely qualify?
- 8) Are field officers aware that placing orphaned cubs in rehab is an option available to them?
- 9) What is the orphaned cub's physical condition - is it immediately life threatening - can we save it?
- 10) Is the cub really habituated (used to people) or is the cub exhibiting normal behavior for a starving or injured cub?

### **What you can do to help orphaned cubs**

Some wildlife agencies will euthanize orphaned cubs or place them in captive facilities without opting for bear rehab even when available to them. In those situations, the public should ask why rehab was not an option. Although our wildlife agencies focus on bear populations, it is important they recognize that the public does care about orphaned or injured cubs and respond to those concerns. Bear cub rehab should be the first option whenever possible in their bear management plan. Placing orphaned cubs in permanent facilities is not the preferred alternative, even when that option is feasible. Wildlife agencies must be accountable for their policies and actions. The public also has a responsibility and a role in helping wildlife agencies to develop sound policies for rehabilitating orphaned bear cubs.



### **What should I do if I see an orphaned cub?**

As a caring and compassionate society, each of us has a responsibility for the welfare of our wildlife. If you think you found an orphaned cub, take the following steps:

- 1) Do not try to capture the cub yourself - it may not be orphaned & mom could be around
- 2) Determine the exact location - use milepost markers, signs, trail markers, landmarks, etc.
- 3) Contact the nearest wildlife agency with details on the cub and the exact location
- 4) Tell the officer you will wait at that location for them (if at all possible) - this will not only make their job easier in finding the cub, but encourage them to respond quicker
- 5) If you know a bear rehabilitator in the area, call that person also - he or she can take additional steps to ensure the cub receives help
- 6) Be aware there may be more than one cub in the area - listen and keep your eyes open
- 7) Follow up - make sure the cub was found, rescued, and ask what they did with the cub
- 8) If they placed the cub in rehab, ask for the name & phone number of the rehabilitator
- 9) Contact the rehabilitator & share any information you have on the cub

December, 2004

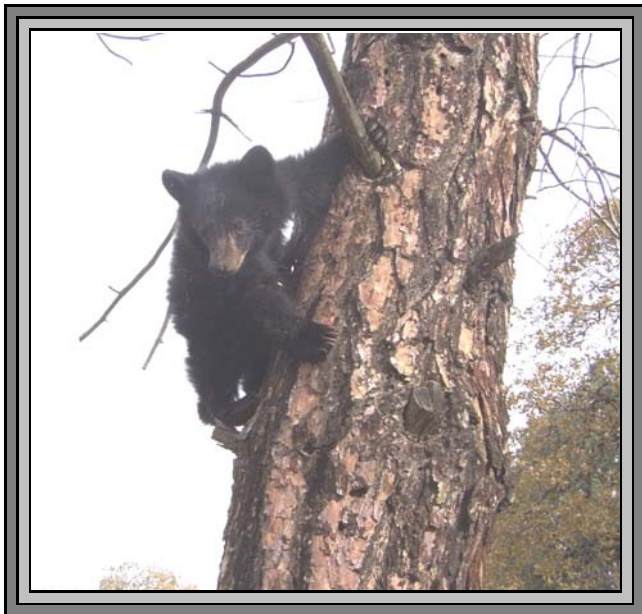
## FOR THE BEARS - continued

If you know of an orphaned cub at risk, please contact the local wildlife agency. Ask questions and get as much information on the situation as possible. If you still feel the cub is at risk, e-mail IBBR and we will try to help in whatever way possible. Please give us as many accurate details as you can. Include the name, phone number, or e-mail of a wildlife agency contact or an individual who is directly involved in trying to help the cub. Although there are not many bear rehabilitators in the U.S., IBBR does try to keep an updated list of known licensed rehabilitators experienced in handling bears. We will try to find the one nearest you. IBBR also accepts cubs for rehab from other states, but these cubs must return to their home state for release. If the wildlife agency agrees to take the cub back for release and it is feasible from a logistic standpoint, IBBR can take the orphaned cub into our program. Let's make it as easy as possible for wildlife agencies to use rehab as their first option. IBBR will do what we can by sharing our expertise to help any cub at risk. Also, if you know of a wildlife rehabilitator in your state that takes orphaned cubs, please share that information with us.

### WILDLIFE AGENCY'S POLICY ON ORPHANED CUBS

In 2004 IBBR began a project to provide information on our web site for each state with a wild bear population. This is a work in progress that will provide both the public and wildlife agencies with information on how each state handles orphaned cubs. Our web page will have a link to any bear management policies published on each wildlife agency's web site. We will send out questionnaires requesting information on their policy for handling orphaned cubs. The questionnaire will also ask for the statistics on how many injured or orphaned cubs were reported to them during the previous year. We will ask for figures on the disposition of those cubs - euthanized, placed in rehab, placed in a permanent facility, never brought in, etc. When they give us that information, we will make it available on the IBBR web site.

Sally Maughan  
Founder & President  
Idaho Black Bear Rehab, Inc.



December, 2004

## 2004 PRE-RELEASE INFORMATION

Normally we update the handbook at the end of the year or after the release of the bears received during that year. 2004 was a record year for orphaned cubs and a very interesting year. The past couple of years saw a strong anti-predator attitude in the Western states and many orphaned cubs were lost due to that attitude. Hopefully, we have weathered that period and if 2004 is any indication, orphaned cubs are once again being helped. We are including this preliminary information since all of the cubs received during 2004 will be spring releases.

This year IBBR received 37 cubs from Idaho, Oregon, Washington, Utah, and Wyoming between 2/20/04 and 12/31/04. It has been very challenging to manage so many cubs needing help. Most of them arrived late fall on a weekly basis which is what makes it manageable. During fall, the cubs use less than half of the enclosures, are sleeping a lot, and not being very active for long periods of time. We have learned some new things and watched some interesting behavior.

In the main enclosure it takes new cubs 2-3 weeks to merge into the main group. This year at one point as we placed a new cub in the enclosure, we could just see the bears almost shrug as if to say "Oh, it's just another one". In the past the cubs already in the enclosure would run from the new arrival, woofing and issuing all kinds of warning vocalizations and behavior, no matter the size of the new arrival. Now, they just ignored the new arrival. There wasn't any vocalizations or running - just a raised head to see what was going on and then back to snoozing.



We added new dens to help absorb the additional cubs. The majority of the fall arrivals were very

small, weighing anywhere from 12 lbs up to 27 lbs. All quickly started gaining weight and growing in size. The last cub arrived Christmas eve, just in time for dinner. Less than half the cubs will hibernate and the other half will remain active and eating throughout the winter. Some will probably hibernate slightly in



February, but all will be active sometime in March. For the next 60 days after that until their release, it will be a lot of fun watching all the behavior, wrestling, chasing, and games that are bound to go on all day.



We also built a second entry into the back part of the enclosure. Now we can enter from the front or back section which makes it easier to isolate any cubs when needed. If it all comes together, we will add a solid roof over the entire enclosure during January, 2005. Borah High School Special Ed class is building us 5-6 new hollow logs to add to the enclosure in 2005. They will serve as dens and summer hangouts as well.



2004 PRE-RELEASE INFORMATION - continued



December, 2004

## BEAR NECESSITIES - WISH LIST

The Idaho Black Bear Rehab Program needs your help. Without this program, orphaned bear cubs would not have a place to go. Zoos and wildlife parks no longer want or need cubs as they have their own breeding programs. The cubs are raised for release back into the wild. They remain with us until December when we take them to dens in the mountains. When they come out of hibernation the following spring, the cubs are on their own.

It costs about \$800 - \$900 to feed and care for each cub during the eight or nine months they are with us. If everyone could donate even the price of one soft drink, it means we might help one more cub. Do you know anyone who has fruit trees, hazelnuts, or acorns? Would you like to help gather fruit and nuts for the cubs? Students could make the bear program a school project & if your school isn't close to us, you might coordinate with a local school. All we need to help the cubs are the specific items below.



**ALWAYS NEEDED: \$\$ for formula - Fresh fruit during season**  
**Xerox Phaser 8200 ColorStix Ink - yellow, cyan, magenta, black**

Ruggles - 1989 - He started it all!

### **VOLUNTEER HELP - DONATED PROFESSIONAL SERVICES:**

Volunteer Coordinator \* Volunteers to collect fruit & nuts \* Printer to donate printing handbooks, newsletters, and other documents \* Electrician to rewire old wiring \* Design engineer to design an awning for our shade netting that covers the enclosure so we can roll it out & withdraw it as needed \* Landscape designer to help us design and build a new swimming area inside the enclosure

### **GENERAL SUPPLIES:**

Bath towels \* Hand towels \* Lumber \* Copy paper \* Large & medium Vari-Kennels \* Stamps  
Large tree logs or stumps for climbing \* Xerox copy machine toner cartridge 6R881

### **SPECIALITY ITEMS:**

**Available by Special Order from UPCO (800) 254-8726 - - you can arrange payment with UPCO - ship to address at bottom - no substitutions please)**

Milk Matrix #99882 (15 Lbs) - Esbilac #9498 (5 Lbs powdered) - Vionate #615 (2 Lbs)

**Available by special order from Treasure Valley Feed (208) 939-1539**

Mazuri Omnivore Zoo Biscuits - stock #5635 - 40 lb bags

### **FORMULA ITEMS:**

6 oz jars of Gerbers #3 fruit baby cereal \* Plain or flavored Yogurt \* Honey \* Cans of condensed milk (not evaporated) \* Natural applesauce \* Boxes of oatmeal \* Boxes of Gerbers baby rice one grain cereal

### **FOOD ITEMS :**

20 LB sacks of Albertson's **CHUNK STYLE** dry dog food \* Bread \* Acorns & Hazelnuts \* Fish (salmon or trout) Raw carrots \* Cans of fruit \* Cans of vegetables \* Cottage cheese \* Avocados

### **FRESH FRUIT ( Please ask if fruit was sprayed with insecticide) :**

Apples, peaches, pears, grapes, plums, cherries, apricots, watermelons, cantaloupes, blackberries, blueberries, boysenberries, strawberries

Please find enclosed my donation for \$ \_\_\_\_\_ to help save an orphaned cub.

Name: \_\_\_\_\_ Address: \_\_\_\_\_  
\_\_\_\_\_  
(Please Print)  
(Please Print)

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Thank you for your support and help. We will send a tax deductible receipt to you.

Send questions or comments to:

Idaho Black Bear Rehab, Inc.  
Attn: Sally Maughan  
6097 Arney Lane  
Garden City, Idaho 83714  
Phone: (208) 853-3105  
Fax: (208) 371-6089  
E-mail: [IBBR@bearrehab.org](mailto:IBBR@bearrehab.org)



For more information on bears we recommend:

**A Shadow in the Forest**  
By John Beecham & Jeff Rohlman

## NOTES

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**World Society for the Protection of Animals**