

Reducing aggressive behaviour of kiang (*Equus kiang holdereri*) male in Prague Zoo

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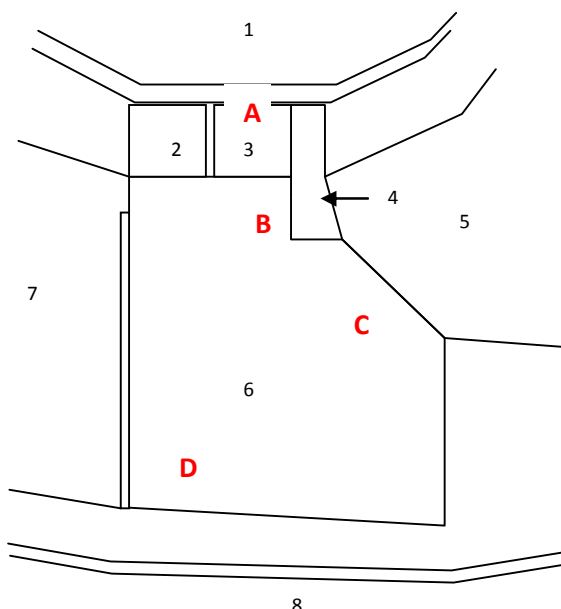
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Abstract:

In autumn 2008 we provided a training process with kiang male, named Taushken. This male has been aggressive for many years and in the last couple of months his behaviour became to be dangerous for himself. It was possible to see reduction of body weight about 40-50 kg and injuries made by himself mostly on his head. We applied clicker training to teach him quiet behaviour under cue in specific situations. Especially in situations, which were most dangerous in previous time – seeing the keeper in enclosure of females, attacking visitors and so on. First two weeks the work was provided only by trainer, after these two weeks, when we found the male understands the clicker sound, the main keeper of horses started to do the same. After one month of training we reduced his aggressive behaviour and attacks on keeper for minimum and we started to do a training of protected contact. Now this animal comes quietly to the bar of yard, impress his body on the bar and let the keeper to touch him on hip by hand. We have minimum trouble with attacks during the time of cleaning females and with shutting male into inside box. But the work is still not done, because there are still many influences from outside (especially some special visitors), which are still able break down kiangs quiet behaviour for a little time, so the training process must go on.

Material and methods:

The kiang male Taushken is 17 years old, he has been in Prague Zoo from 1994 and his aggression has been provided at least for last 6 years. It become worse after separation from females group because of temporarily stop of breeding program four years ago. His aggression was most common at these situations and on places – see picture:



A – aggress. against keeper during the time of locking kiang in inside box for cleaning outside place (hoofing to the door, screaming)

B – against keeper during feeding time –feeding by vegetable (hoofing, screaming)

C – against keeper in the time of cleaning female group (hoof, scream, clash with head to the bar of yard)

D – against visitors, dogs and employee of zoo on the visitor road (hoof, scream, clash with head to the bar of yard, quick running along the yard)

1 – inside part of the kiangs and horses house, the road for keeper

2,3 –inside boxes; 4 –courtyard for keeper – feeding kiang by vegetable over bar; 5 –females

group yard; 6 –male yard; 7 – yard for Przewalski horses – during training process no horses inside; 8 - visitors road

We decided to start training program on the place D, because there is a good possibility for kiang to see trainer for a long distance (and it enables us to work with distance behind trainer and kiang and

change it during training) and because during the time of training the trainer is never placed between male and females group.

As positive reinforcement we use dry bread. We also know, that presence of anyone near enclosure is a negative reinforce for that aggressive male so we have to reduce it for necessary minimum.

For the first step of training process we decided for combination of this three techniques – 1) “Give them power” - we let animal to know, that he has a power to send us go away anytime he wants with minimum effort. 2) Reinforce absence of behaviour – we reinforce every behaviour which is different from the one we don’t want 3) Reducing necessary negative reinforcement as reward – technique described by Karen Pryor used with lamas. When the animal does not accept trainer’s presence, he use “going away” as reward for quiet behaviour.

Our information for kiangs male was: “ You have the power to make us go away with minimum effort needed. But remember, that we have positive reinforcement for you and you can have it, if you stay quiet. It is just on you, if you want to let us go or to earn reinforcement.”

We found 4 steps of growing up his aggressive attacks:

1) No aggression – 2) Dominant running around -3) Dominant running around and screaming – 4) Screaming, hoofing, clashing with head to the bar of yard and so on

We reinforced by positive reinforcement only degree 1 and 2. If we saw degree 3 or 4, we only went away and gave him no reinforcement.

For clear communication with kiang we use cues made by positions of trainer’s body (basic position for “being quiet” is trainers right hand with bred up, left hand with clicker down, standing by the right side of trainers body to animal). As bridge we use the sound of clicker.

So the communication looks like this:

Trainer is coming in basic body position - kiang is coming and a) screaming or b) just dominantly running around or totally quiet.

If it is a) (screaming), trainer does not give any bridge or bread, but only, still in basic position, goes away to the distance, when male stops screaming. Than after about 1 minute he can try it once more.

If b) (no screaming), trainer clicks (bridge) and throw a piece of bread into enclosure. If kiang is still quiet and goes away from bar to eat the first peace, we click (bridge) and throw into enclosure next one piece, now bigger. We can do it maximum three times, than go away to bigger distance (reducing negative reinforcement).

Results:

Training process provided only by trainer started at **28.10.2008** on place D (picture above). We provided it about 1-3 times a day only about 10 minutes every lesson, maximum 5 training days a week.

At **3.11.** (after three lessons) we found out, that male starts to understand the bridge and it was possible to see, how he deliberately makes the degree 1 (quiet) longer and longer. At **7.11.** the trainer introduced method to keeper. From this time the keeper started to apply this technique on places A,B,C (picture above) during feeding time, cleaning enclosure and working in the females yard. He made it five times a week, mostly from Monday to Friday (during weekend there was different keeper)

At **12.11.** keeper first time recorded quiet behaviour during this processes written above.

From 12. to 15.11. keeper first time recorded 4 days long line of “quiet behaviour days”

20.11. keeper and trainer introduced this method to every other keepers, which can work with kiang during weekend and they started to apply it.

From 24.11. trainer stopped his activities on place D (picture above) and let every training process on keeper.

At 28.11. kiang first time enabled to keeper to touch him through bar and from this time it is every lesson possible to train sheltered contact by this way (it looks to become another positive reinforcement for kiang, but we are not sure).

From 24.11 to 28.11. keeper first recorded all the five work days of week quiet behaviour (except Monday morning, see below). The only remaining problem was, that after weekend the kiang was every Monday aggressive, but it reduced during Monday afternoon to Tuesday.

15.12. the “Monday morning tantrum” first was absent. Before this time every Monday morning after weekend with different keeper the male was nervous improved his behaviour to the quiet with known keeper at about Monday afternoon or Tuesday morning.

Now (19.12.) the situation is, that on places A,B and C behaviour is mostly quiet. On place D it is possible to see, that after stop of training process on this place D the behaviour of kiang a little broke down and only on this place he is sometimes aggressive to visitors (about 50% of original level before training process, but more than before trainers absence) So it looks like, that quiet behaviour is deliberate and remains only on places, where it is still in training process (A,B,C) and on places without training it a little breaks down (D).

Discussion and plan for future:

It is possible to see, that we established a system of positive communication which enables us make this male to be quiet and reduce his aggression. But it is as well possible to see, that this quiet behaviour stays only in the places of enclosure, where training process goes on. After long break in training process in down part of enclosure (D) the aggression especially at this part came back and male stays quiet only in places A,B and C.

In place D we have one more trouble – one visitor (old man), coming at least once or two times a week (mostly Sunday, Monday and Tuesday). This visitor is already known to Taushken at least for one year. Taushken does not like him, maybe because of some bad history. At least one year this visitor has come to the vicinage of place D, staying on visitor’s road and just waiting for a long time. The kiang’s reaction is, that this kiang starts to do aggressive behaviour, attacking that place, screaming, hoofing, clashing with head to the bar of yard and so on. We found out this visitor during November 2008 and from previous keeper we know that this activity was the same at least one year ago. Maybe that is the main reason for Taushken’s “Monday tantrums”. Although we spoke to this man, we know, that when we are not present, he comes to this place permanent. But we already have tested, that 30 minutes after his “visit” we are able to make Taushken to be quiet again, so it is not so big trouble and we will resolve this man “visits” during future time.

Although kiang is very quiet during common training from keeper, he is still not able to accept small changes and falls in small tantrums when any change occurs. For example when there is not one but two keepers in the courtyard his behaviour can quickly brake down. We see, that it is necessary to anticipate “superstition behaviour” connected to number of keepers, their dress, place and so on and we have to do more trainings in different places with different number of people and so on...to teach him this quiet behaviour in different situations.

We can maybe expect some trouble with a lot of energy cumulated because of long time absence of tantrums. The male is alone in enclosure without any other kiang (he can see females only in another yard). Although his tantrums were not healthy for him, it was the only one occasion to pass up the energy and to be active. It is possible, that his small tantrums during Monday and during some small changes will still occur because of not enough enrichment inside enclosure. So it could be necessary for good training process to make some enrichment "machines" which will help him to lose energy by another way than tantrums against new things .

One thing we can try to resolve trouble with a lot of energy and with the old man still disturbing (see above) is "to catch bad behaviour under cue". If we will make a special cue for dominant running around, screaming, hoofing and we will reinforce that behaviour only after that special cue, we will have a control over these bad situations. During future time we improve this "common bad behaviour" to a little different which will not be "really aggressive" but only training by positive reinforcement and to lose energy. If we will catch this bad behaviour under cue, it is possible to expect, that the male will reduce his attacks on the one visitor, because that man does not use the special cue for "bad behaviour", so the cue is absent and as well the behaviour (if it is really under stimulus control) .

So our **plan for future is:** **1)** Training the quiet behaviour in many different situations to anticipate superstition behaviour connected with place and other things; **2)** Make more enrichment in enclosure to let kiang to lose his energy; **3)** Maybe to catch the bad behaviour under special cue and have it under good stimulus control.

We know as well, that live of one male alone in enclosure is not natural for kiang and we will try to change this situation. But at this time it is not possible because of many things not written in this report.

If you have any ideas or comments, **please contact us on address:** fsusta@zoopraha.cz

In Prague, 19.12. 2008



Traying to attack keeper on place B – first week of november 2008



Quiet behaviour on place B – 4.12. 08



Training of sheltered contact – 4.12. 08