



Training Successes With Southern White Rhinoceros at Colchester Zoo

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The old saying goes 'you can't teach an old dog new tricks'. The same does not apply to the southern white rhino at Colchester Zoo. A remarkable training practice involves Flossie, an elderly female suspected to be in her early forties, willingly lifting her hind leg to receive medical treatment on her hoof, much as a horse lifts its hoof for a farrier. This procedure is evidently painful yet she daily submits to the treatment due to the familiarity and trust built up by our section team.

Who's who

Flossie is one of three female white rhinos housed in a mixed species exhibit at Colchester Zoo. Flossie herself was wild born and has had foot problems for about the last ten years. Since coming to the UK, she has spent most of her adult life with a male, Simba, who sadly was put down earlier this year due to old age and failing health. In addition, the zoo is home to two much younger females, Emily who is approximately 9 years old and Cynthia who is around 11 years old. Both originate from a reserve in South Africa and were brought to the UK to boost the European breeding programme.

Training initiation

Target training of the rhino was first proposed in order to make it easier to move the two tonne animals between their night quarters and in and out of the paddock. Each animal was introduced to its individual target, which is simply a plastic rod with different coloured balls secured to the end. Using the classic technique, a verbal cue ('target') is given, in response to which the rhino touches the target with its top lip, a whistle bridge is used and small pieces of bread given as a reward. In a short space of time each rhino was successfully touching their targets when asked. A white rhino's eyesight is relatively poor compared to their sense of smell and hearing, however each animal recognises its own target and appears to actively enjoy each session.

Practical training uses

This simple training method, widely used in zoos and aquariums with a multitude of species, has allowed our team of keepers the flexibility to change the rhinos' daily routine whenever necessary without causing undue trauma to the animal. It has greatly helped when introducing each rhino to a new experience, for example positioning an animal for injections by hand and to take blood from the ear, both of which are now carried out successfully with the rhino on a regular basis. The familiar 'game' of a session makes these new experiences less stressful for both the rhino and the keepers.

The zoo recently had a new birthing den area and crush system integrated into the present rhino indoor living quarters. The zoo had also been approached by researchers from the Royal Veterinary College looking into gait and weight distribution of large mammals. This seemed an ideal opportunity to use our new crush and further test our training. Targeting the rhinos repeatedly through the crush helped keep them focussed and gave an unusual activity a recognisable feel. After a few weeks of training this resulted in all three girls happily walking through the crush over special electronic mats a minimum of 20 times each and the researchers were able to collect some really good data on the day with minimum fuss from the rhinos.

Back to that old dog

Flossie's foot had started to cause her serious problems. The source of the difficulty being a hole in one of her toes on her hind hoof. There were days where she would refuse to leave her stall due to the pain in her hoof and previous treatments, such as foot baths and

mats soaked with disinfectant, were not effective. It was necessary to have direct access to the hole on the underside of her toe. Therefore a proposal was put forward, protocols drawn up and a new scheme implemented. This involved positioning Flossie in the yard, close to vital safety gaps (even an elderly rhino with major hoof problems can turn very quickly when spooked!) and encouraging her to lift and hold up her hind foot, a precarious stance for such a large animal. Thanks to the previously learnt target training, Flossie could be easily manoeuvred into the correct spot and she was already very used to, and indeed sought out, physical contact with her keepers.

Lifting that leg

Scratching Flossie's inside thigh (apparently a popular pressure point for white rhino) resulted in the raising of her hind leg. A whistle bridge and bread reward reinforced the behaviour. Over time this was developed until tapping the outside toe of the afflicted foot with the simultaneous cue of 'lift' generated the same response. When lifted, one keeper supports the foot while another performs treatment on the toe. Whenever the foot is raised continuous reward of apple and carrot, not to mention the ever-desired bread, is supplied to encourage her to continue holding her foot up. To start with a block of wood was used to support her foot throughout the treatment, however this interfered with the keepers access to her toe and it was soon apparent that Flossie was happy to keep her foot raised and supported by keepers for long periods of time without the block.



White rhino 'Flossie' having been targeted into position in preparation for her footwork.

Daily routine

This is now a daily routine for Flossie, occurring every morning before spending the day in the mixed species paddock. She often has an audience from the public viewing platform above the yards and will stand for treatment despite regular disturbances. Healing in such an elderly animal is, inevitably, a very slow process. However the remedy prevents infection within the toe, encourages healing and alleviates pain.

This method is a fantastic success for Colchester Zoo, one that we hope to build on as we progress the training further. Apart from the practicalities of training, our keeping staff have built up a very close relationship with the rhino in their care. To be able to have such a working relationship with white rhino is invaluable and, quite frankly, uniquely enjoyable.

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White rhino 'Flossie' undergoing daily treatment on her toe.