ANIMAL KEEPERS'

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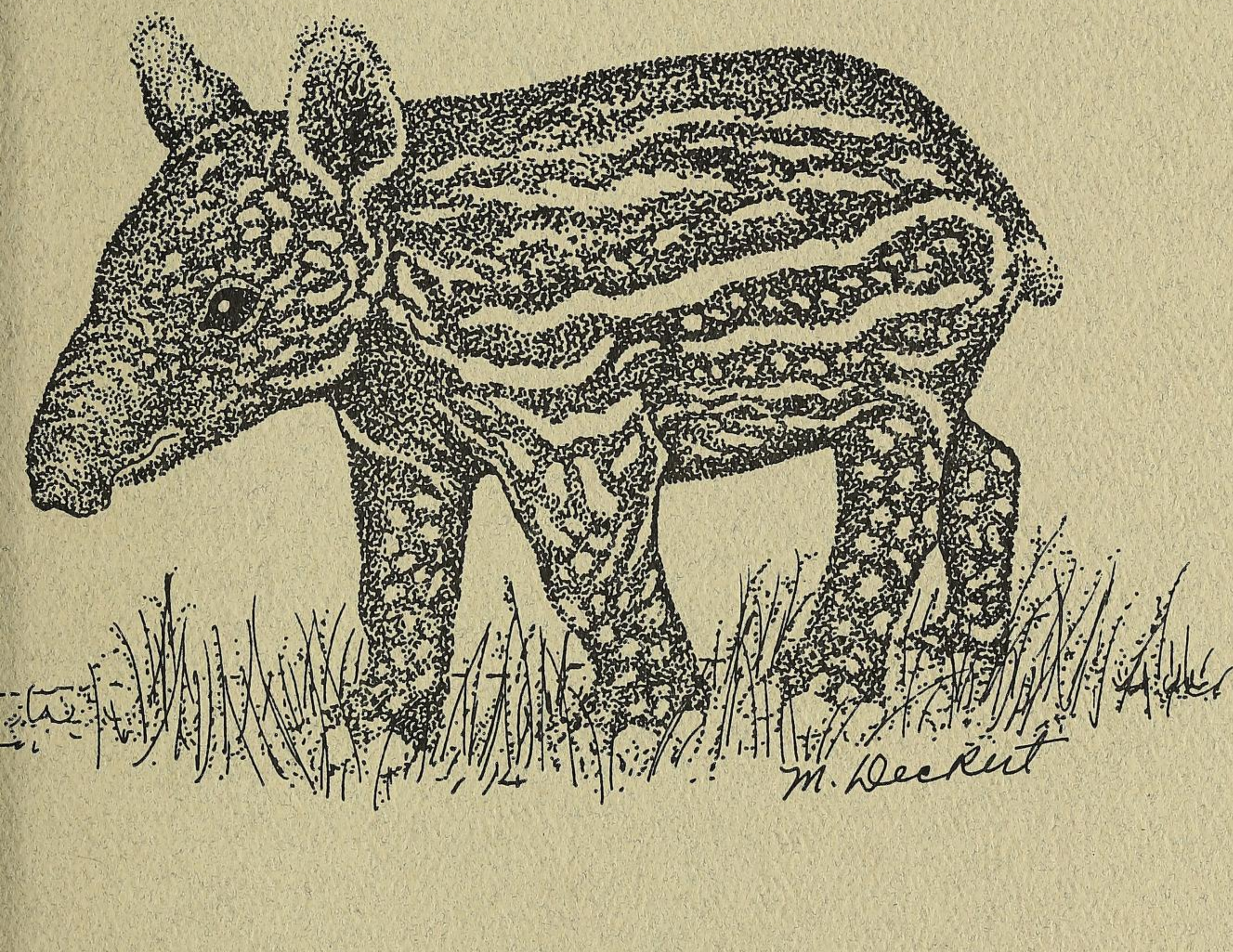

The Journal of the American
Association of Zoo Keepers, Inc.
NOVEMBER 1997

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Results of an Effective Conditioning Program for Rhinos

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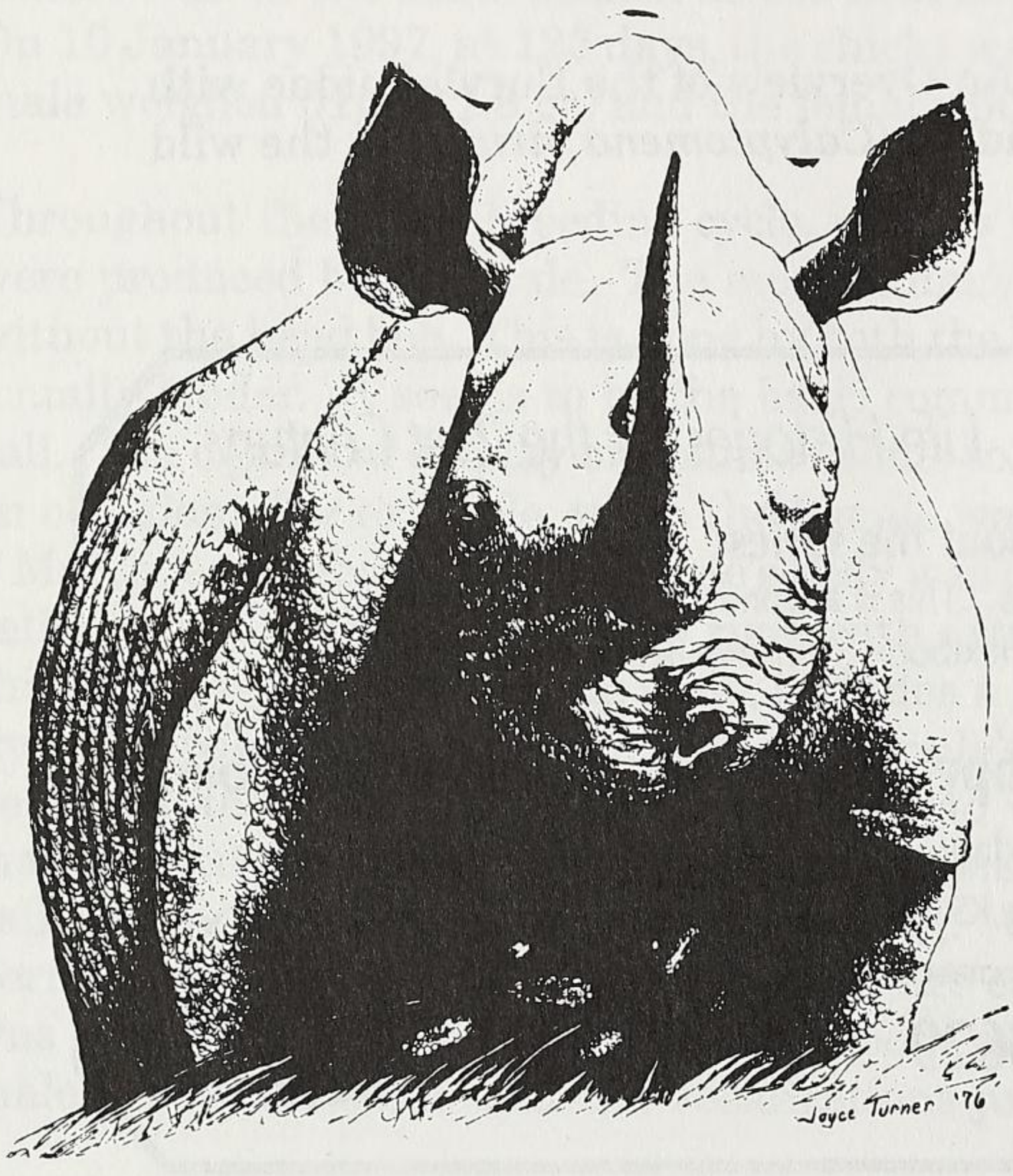
Effective management of some animals, particularly mega-vertebrates, can present many problems. The training and conditioning of our rhinos has facilitated veterinary care and increased opportunities for research. Every aspect of our rhino conditioning program has been keeper-initiated with the support of the senior animal staff.

Our goals were to have voluntary cooperation for blood draws and the ability to perform basic husbandry or veterinary procedures without mechanical or chemical restraint. The programs used at the Milwaukee County Zoo have accomplished this in a relatively stress-free environment, which is critical when doing metabolic or hormonal research. We are now able to obtain samples or do procedures in a timely and repetitious manner. Specific strategies need to be developed for the individual rhino. Some are very tractable and seemingly enjoy zookeeper interactions, while others are not so manageable. Less tractable animals require more intense work, but many of the problems can be overcome.

Our ability to obtain blood samples twice a day from our female black rhino while in estrous will enable research to be done using species-specific protein hormones. We are currently supplying multiple serum samples to reproductive researchers attempting to isolate rhino fertility hormones. If successful, the impending ovulation can be determined using luteinizing hormone levels. An early diagnosis of pregnancy can be made if chorionic gonadotropin is found to exist and isolated as well. Another reproductive biologist is trying to assess the hormone relaxin as a potential pregnancy indicator in rhinos. None of these sample collections have interfered with any of the normal breeding interactions.



We provided sequential samples to another endocrinologist studying the serum steroid patterns in our female black rhino. The analysis monitored the ovarian activity throughout her pregnancy and birth.

In the past, we have collected milk samples from our lactating rhino and are presently in the process of collecting semen from our bull. The principal investigator hopes to get to the point where semen freezing and thawing techniques can be improved.

To date, our pair of wild-caught black rhinos have produced two offspring. The first calf was transported to the Western Plains Zoo in Australia. He had been conditioned to accept blood draws and hand injections. He also allowed routine oral and rectal exams to be performed. The institution that receives our most recent calf will have the opportunity to perform routine veterinary care, blood draws, ultrasonography, and minor foot care, if required.

We have also worked extensively with an Indian rhino. In the fall of 1991 we received a surplus male with severe foot problems.

It was apparent that he was a very tractable animal. After a couple of weeks of acclimation, he allowed us to enter the stall. We were able to scratch him down into lateral recumbency. Pododermatitis, along with a total separation between the sole pad and middle nail was confirmed on both rear feet.

This rhino turned out to be labor intensive, requiring veterinary care on many occasions. In the five years that we maintained this animal he was immobilized six times. He went through five surgical procedures on his rear feet and once for a root canal on a fractured incisor.

Unlike our black rhinos, conditioning of the Asian rhino was strictly for medical management. He allowed blood sample collections and injections using an ear vein, after being scratched down. Keepers would work on his feet at least once or twice a week. After the foot surgeries, daily care was required to repair dressing and cast materials. He has since been sent to The Wilds in Ohio, with the hope that a milder climate and different substrate environment will improve his condition.

The results obtained show that normally unpredictable animals can be evaluated and handled in a safe and protected-contact manner. The application of positive reinforcement enables procedures that were once considered invasive to become part of a daily routine. Conditioning can be used as a valuable management tool that enables us to provide the best of care with a lot less stress.