

RHINO RESOURCE CENTER

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NEWSLETTER #70 MARCH 2023

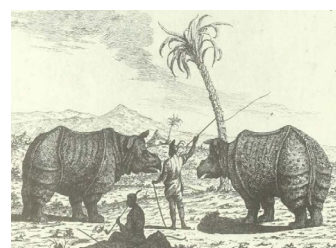
Dear colleagues and friends,

This is the 70th issue of the quarterly e-newsletter of the Rhino Resource Center. Edited by Dr Kees Rookmaaker. Definitely not by design, this newsletter no. 70 coincides with my birthday no. 70.

The total number of references in the collection of the RRC now stands at **27,367**. This is an increase of 192 items in the last quarter. Over 27,000 references are **available** as PDF on the RRC website.

THE RRC IMAGE GALLERY

Regular users will know that the RRC has a fantastic Image Gallery with now over 6200 pictures of rhinos of all sorts. The search engine finds any word in the description, or you can browse by species. Unsurpassed.



SUPPORT the RRC

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The Rhino Resource Center is a Charity (Registered KvK Utrecht 30185802)

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How to Raise A Rhino

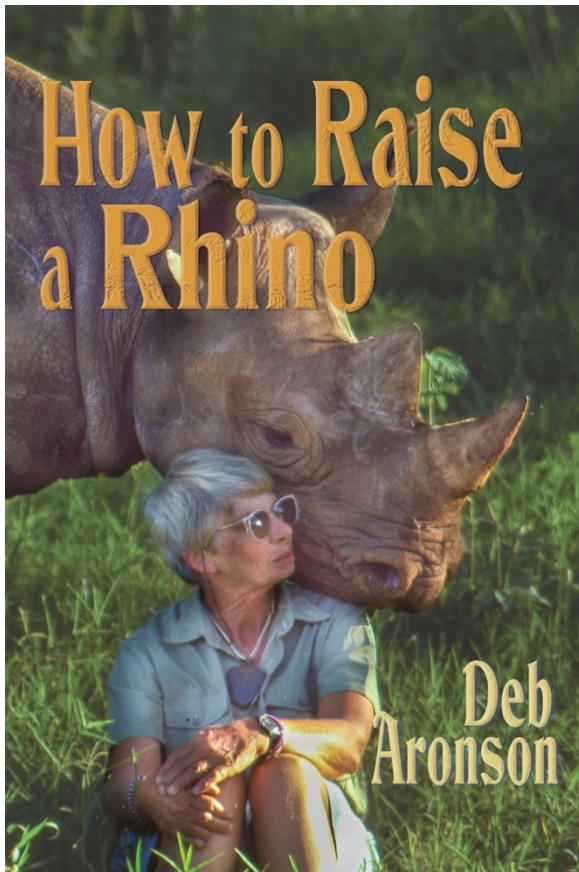
A biography of Anna Merz, founder of Lewa Downs Black Rhino Sanctuary
Available May, 2023

Author: Deb Aronson

Bedazzled Ink Publishers

Available on Amazon, Bookshop and elsewhere.

Intended for readers 8-13 (and older)



Deb Aronson learned about Anna Merz from her obituary and the eye-catching photograph of a full-grown rhino resting its chin on her shoulders. An author of non-fiction for young readers, Aronson spent the next five years researching and writing about this unusual woman and her efforts in the world of black rhino conservation.

Merz spent much of her adult life in Ghana, racing horses, exploring the Sahara, and rescuing orphaned wild animals that were dropped at her door.

When Anna retired to Kenya, she anticipated rest and relaxation. Instead, she found her true calling, that of Kifaru Mama (Rhino Mama).

Witnessing the slaughter of wild animals sold for their parts, Anna determined to rescue the highly endangered black rhino. From building 8-foot-tall fences around 5,000 acres of land, to darting rhinos from helicopters and trucking them to safety, and adopting

a newborn rhino abandoned by her mother, Anna's life became one challenge after another.

As she struggled against savage poachers, in-country politics, and her budget, Anna's love for Samia meant she couldn't give up. Can Anna really make a difference, or is this, as her husband said, "another of her wild ideas?"



Pachyderm

July 2021 – September 2022

Number 63



IUCN/SSC
African Elephant Specialist Group
African Rhino Specialist Group
Asian Rhino Specialist Group

Pachyderm
Journal of the African Elephant, African Rhino and Asian Rhino Specialist Groups
July 2021 – September 2022 No. 63

1 Chair reports/Rapports des Présidents

1 African Elephant Specialist Group Chair report/ Rapport du Groupe de Spécialistes du Éléphant d'Afrique
Menson (3-14), Ouma (17), Abb (20/21)

17 African Rhino Specialist Group Chair report/ Rapport du Groupe de Spécialistes du Rhinocéros d'Afrique
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33 Asian Rhino Specialist Group Chair report/ Rapport du Groupe de Spécialistes du Rhinocéros d'Asie
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38 Research

38 The Ganges elephants through war and recovery: tusklessness, population size, structure and reproductive parameters across India and Nepal
Cristina

55 Process and outcomes of ivory-related trade in Kenya, 2016-2018
Andrew Halliday, Shamin Jayanathan, Pankaj Karantam, Jim Kazera, Akry Akintoye

Check the full content of the journal on the RRC website: www.rhinoceros.org. The RRC website is a free resource for all rhino conservationists. The RRC website is a free resource for all rhino conservationists. The RRC website is a free resource for all rhino conservationists.

NOW PUBLISHED

Edited by Suzannah Goss on behalf of the IUCN/SSC African Elephant, African Rhino and Asian Rhino Specialist Groups, with assistance of Lydia Tiller and Kees Rookmaaker.

Available online, open access: [here](http://www.rhinoceros.org)

Papers about aspects of rhinoceros conservation:

Rookmaaker, L.C., 2022. Rhinoceros borili Blyth, 1870, a forgotten name for the black rhinoceros. *Pachyderm* 63: 198-200, fig. 1

Wilson, Oscar E.; Pashkevich, M.D.; Turner, E.C.; Rookmaaker, L.C., 2022. The Rhino Resource Center: Accessing and utilizing a unique digital database. *Pachyderm* 63: 190-197

Balmford, A., 2022. Book Review: The hairy rhinoceros by John Payne. *Pachyderm* 63: 215-216

Choudhury, A., 2022. Towards a new rhino conservation landscape in Assam for the increasing population of the greater one-horned rhino (*Rhinoceros unicornis*). *Pachyderm* 63: 179-182

Knight, M.; Mosweub, K.; Ferreira, S.M., 2022. African Rhino Specialist Group Chair report. *Pachyderm* 63: 17-32

Patton, F.J.; Campbell, P.E.; Genade, A., 2022. Aspects of white rhino movement over a 12-month period based on hourly GPS location data. *Pachyderm* 63: 207-214

Sharma, A., 2022. The population status of the greater one-horned rhino in India and Nepal, and the importance of regular monitoring census intervals. *Pachyderm* 63: 176-178

Talukdar, B.K., 2022. Asian Rhino Specialist Group Chair report. *Pachyderm* 63: 33-37

Vigne, L., 2022. Tribute to Tony Fitzjohn. *Pachyderm* 63: 220-221

Whitlatch, C.; Fascione, N., 2022. Birth of Sumatran rhinoceros (*Dicerorhinus sumatrensis*) in Way Kambas National Park. *Pachyderm* 63: 205-206

Whitlatch, C., 2021. Fighting for their survival (International Rhino Foundation). *Pachyderm* 62: 146-147

Willis, D., 2022. Tribute to Richard Leakey. *Pachyderm* 63: 217-219

Yadava, M.K., 2022. In Assam, a horn has value only on a living rhino. *Pachyderm* 63: 201-204.



SOME THOUGHTS – ZOO HISTORY

It has been a quiet quarter of the year, maybe due to the Christmas holidays. Still the RRC has added many new articles and books published at this time. The extent of the RRC with over 27,000 references is an unsurpassed feat which nobody could have imagined when we started 18 years ago from extensive but relatively humble beginnings.

The academic and peer-reviewed literature is relatively easy to monitor with the available search engines and internet presence of many of the journal publisher. These are all important papers which bring special contributions in often unexpected fields.

It is much harder to keep track of the popular literature, especially the magazines, guide-books, postcards issued by zoological gardens around the world. Many years ago I have pleaded for the foundation of a library where publications issued by these institutions would be assembled and preserved. This remains a desideratum. Where do you find a complete series of the old issues of *International Zoo News* or San Diego's *Zoonooz*, not to speak of the hundreds of items which are so carefully published by the zoos, often aimed at a local rather than an international readership.

There are many private individuals with often extensive collections of guide-books, annual reports, newspaper clippings and other zoo-related materials. Unfortunately private means really exactly that, wonderful collections kept in private homes, maybe catalogued and well-organized but not easily accessible.

Today research has become easier through large scanning projects like Google Books, the Internet Archive and Biodiversity Heritage Library. I used to spend many (happy) hours going through library catalogues, ordering the books at a desk, leaving through the pages in search of the sometimes elusive rhinoceros, taking the books to a photocopier or scanner if that was allowed, or taking manuscript notes, then going home and organising all the findings. That was the start of the RRC. Now all these actions can (in many cases) be accomplished sitting at home with a laptop, presenting an enormous and incalculable savings of time, money and effort.

These scanning programs are of course a work in progress. However, zoo literature is very poorly represented, just because there isn't a comprehensive collection with the vision to contribute its holdings to an international remote public. There is a lot to be learned from research about the management of animal species in zoos and similar institutions. That history should not be allowed to disappear, as seems to be the outlook today.

Let us try to preserve also the lesser contributions of all authors in these great subjects.

Kees Rookmaaker





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Thank you very much.

*The Rhino Resource Center is a registered charity.
We need your assistance to provide our service to all rhino lovers worldwide.*



CONTENTS OF THE RHINO RESOURCE CENTER

The development of the Rhino Resource Center is shown in the table here.

RRC	2022 March	2022 June	2022 Sept	2022 Dec	2023 March	ANNUAL INCREASE
References	25,655	26,092	26,720	27,175	27,367	+ 1,712
PDF files	25,625	26,095	26,820	27,265	27,400 *	+ 1,775
Images	4,675	4,818	6,005	6,202	6,229	+ 1,554

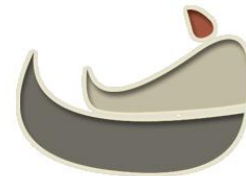
* Some references have more than one PDF attached, mostly due to file size restrictions.

Many thanks to everybody who has helped us by sending copies of books and papers, information, data, news, pictures, photographs – all shared across the globe.

DONATIONS TO THE RRC

It is really very easy. No problem to the audience of the RRC. To show appreciation of our work and to make future contents even better, a small donation goes a long way. Visits to libraries are no longer necessary, just think of the expensive time gained and research results improved. The button leads to a page with instructions.

[DONATE HERE](#)



The Rhino Resource Center is an essential tool for

- 👉 Information and image supply to media
- 👉 Academic research in biology, conservation studies, art history
- 👉 Education in primary, secondary and tertiary levels
- 👉 Conservation of rhinos both *in-situ* and *ex-situ*
- 👉 Latest information supply of all rhino-related projects
- 👉 Information on all the latest conservation efforts
- 👉 All the historical and most current literature.

YES, YOU CAN HELP:

- 👉 Authors of books, papers and reports can send us a copy after publication.
- 👉 We are always looking for images of all rhinos in books and in the wild
- 👉 We aim to include a picture of every rhino ever kept in captivity
- 👉 Contribute a message to our blog and get into contact with others
- 👉 Place a link on your website to the RRC which will be reciprocated
- 👉 Give us a DONATION when you feel the RRC has helped your work.



NEW LITERATURE (finalized 21 February 2023)

In this quarter (December 2022 to March 2023), we have added 192 new references, to bring the total number of items in the database to **27,367**.

Below I have listed all new entries since 2000 in four categories: General (all species), African rhinos, Asian rhinos and Fossil rhinos.

**Most additions are available on the website.
Search for them on the RRC, it's easy.**

Always check the [RRC website](#) first, many papers are available there.

NEW GENERAL PUBLICATIONS

- Avedik, A.; Duque-Correa, M.J.; Clauss, M., 2023. Avoiding the lockdown: Morphological facilitation of transverse chewing movements in mammals. *Journal of Morphology* 284, e21554: 1-11, 8 figures, <https://doi.org/10.1002/jmor.21554>.
- Baribault, P.A.; Lamberski, N.; Peterson, L.; Bohn, K., 2021. A New Adventure Begins - New Vision, New Future. *Journal (San Diego Zoo Wildlife Alliance)* 1 (1) March-April, calendar issue: 2,11-14, 4 images.
- Baribault, P.A.; Scott, P.; Bohn, K.; San Diego Zoo Wildlife Alliance, 2022. The Safari Park turns 50 - A Golden Anniversary. *Journal (San Diego Zoo Wildlife Alliance)* 2 (3) May-June: 2, 18-21, 19 images.
- Benirschke, R.; Lund, J., 2022. Saving Wildlife: the remarkable story of a conservation pioneer - Kurt Benirschke. *Journal (San Diego Zoo Wildlife Alliance)* 2 (5) Sept-Oct: 22-23, 3 images.
- CITES CoP19 Secretariat, 2022. Rhinoceroses: Draft decisions of the Conference of the Parties. Report to CITES CoP19 Com. II 12, pp. 1-2.
- Harper, C.K., 2023. Poaching Forensics: Animal victims in the courtroom. *Annual Review of Animal Biosciences* 11: 269-286, <https://doi.org/10.1146/annurev-animal-070722-084803>.
- Heard, S.B., 2020. Charles Darwin's barnacle and David Bowie's spider: How scientific names celebrate adventurers, heroes, and even a few scoundrels. Yale University Press, pp. 1-256.
- International Rhino Foundation, 2022. Rhino results at CITES CoP 19. On-line news release, 1-6 - <https://rhinos.org/blog/rhino-results-at-cites-cop19/>.
- International Rhino Foundation, 2023. State of the Rhino Update: Rhino poaching nearly doubles in Namibia. IRF on-line Blog 2-1-2023 - <https://rhinos.org/blog/>.
- International Rhino Foundation, 2023. State of the Rhino Update: Kenya and India's State of Assam report zero rhino poaching losses in 2022. IRF on-line Blog 1-26-2023: 4 pages, 2 images <https://rhinos.org/blog/>.
- Lochen, K., 2019. Traffic Bulletin V16 (3) - V31 (2): Seizures and Prosecutions, March 1997-October 2019 (significant case compilation) . London, Traffic: pp. 1-432.
- Neushoornstichting, 2022. [Various notes on rhinos, in Dutch]. *Nieuwsbrief Winter 2022*: 1-4.
- Okes, N.; Sipos, G., 2022. Visualizing corruption risks in the illegal rhino horn trade supply chain. *Traffic Targeting Natural Resources Corruption Guide (Dec)*: 1-10.



General – continued

- Reichenbach, H., 2022. 19. Jahrhundert: die Jamrachs, Partner und Konkurrenten Carl Hagenbecks. *Hagenbeck* 2022 (4): 46-47.
- Schwarzenberger, F., 2007. The many uses of non-invasive faecal steroid monitoring in zoo and wildlife species. *International Zoo Yearbook* 41 (Jul): 52-74, 1 table, DOI:10.1111/j.1748-1090.2007.00017x.
- Schwarzenberger, F.; Hermes, R., 2023. Comparative analysis of gestation in three rhinoceros species (*Diceros bicornis*; *Ceratotherium simum*; *Rhinoceros unicornis*). *General and Comparative Endocrinology* 334 (13 Jan 2023) 114214: 1-11, with supplementary material, <https://doi.org/10.1016/j.ygcen.2023.114214>.
- Vanruysseveldt, V., 2011. Onderzoek naar rondtrekkende entertainers. *Tijd-Schrift (Heemkunde en lokaal-erfgoedpraktijk in Vlaanderen)* 1 (1): 27-34.
- Wildlife Justice Commission, 2017. Operation Phoenix (December 2017). New York, WJC, pp. 1-17.
- Wildlife Justice Commission, 2022. Rhino horn trafficking as a form of transnational organised crime 2012-2021: 2022 Global Threat Assessment. New York, WJC, pp. 1-111.
- Wilson, Oscar E.; Pashkevich, M.D.; Turner, E.C.; Rookmaaker, L.C., 2022. The Rhino Resource Center: Accessing and utilizing a unique digital database. *Pachyderm* 63: 190-197.



1959 Haynes Paperback Bookshop Edinburgh

NEW PUBLICATIONS ON AFRICAN RHINOS

- Amir, Z.; Moore, J.A.; Negret, P.J.; Luskin, M.S., 2022. Megafauna extinctions produce idiosyncratic Anthropocene assemblages. *Science Advances* 8 (42) eabq2307 21 Oct 22: 1-11, 2 tables, 4 figures, <https://science.org/doi/10.1126/sciadv.abq2307>.
- Angwenyi, S.K.S.; Hassell, J. ; Miller, M.A.; Mutinda, M.; Vitali, F.; Murray, S., 2023. A review of clostridial diseases in rhinoceroses. *Conservation Science and Practice* 2023 (e12906): 1-12 - <https://doi.org/10.1111/csp2.12906>.
- Bingham, B.; The Safari Team, 2013. Myth: Rhino horn has medicinal value. *The Safari* (Utah Zoological Society, Salt Lake City, Hogle Zoo Spring: 9, 2 images.



African Rhinos – continued

- Bohn, K., 2021. Southern White rhino (calves). Journal (San Diego Zoo Wildlife Alliance) 1 (1) March-April, calendar issue: 34, September, 1 image.
- Bohn, K.; San Diego Zoo Global, 2018. Southern White rhino with calf. Zoonooz (San Diego) 91 November calendar issue: April, 1 image.
- Bohn, K.; San Diego Zoo Global, 2019. Edward - First Southern White rhino conceived thru Artificial Insemination in North America. Zoonooz (San Diego) 92 November calendar issue: front cover, July, 2 images.
- Britnell, J.A.; Yichun Zhu; Kerley, G.I.H; Shultz, S., 2023. Ecological marginalization is widespread and increases extinction risk in mammals. PNAS 120 (3) e2205315120: 1-8 - <https://doi.org/10.1073/pnas.2205315120>.
- Carmignani, K.; Bohn, K., 2018. And then there were two (Northern White rhino). Zoonooz (San Diego) 91 July: front cover, 10-14, 7 images.
- CITES CoP19 Secretariat, 2022. Proposals for amendment of the Appendices: Remove the existing annotation on the Appendix II listing of Eswatini's population. Report to CITES CoP19 Prop. 3, pp. 1-11.
- CITES CoP19 Secretariat, 2022. Proposals for amendment of the Appendices: Transfer of the population of *Ceratotherium simum simum* of Namibia from Appendix I to Appendix II. Report to CITES CoP19 Prop. 2, pp. 1-10.
- Clements, H.S.; Balfour, D.; Di Minin, E., 2023. Importance of private and communal lands to sustainable conservation of Africa's rhinoceroses. *Frontiers in Ecology and Environment* early view 9 Jan 2023: 1-8, 2 figures with supplementary material <https://doi.org/10.1002/fee.2593>.
- Dreyer, C., 2022. Jeder Krieg fordert einen Tribut [Kruger NP]. *Der Spiegel* 2022 (46), 26 Nov 2022: 114.
- FOX 35 News staff, 2023. Young White rhino shot and killed at Wild Florida Safari Park days before grand reveal. FOX 35 News Orlando, Florida on-line 31 Jan 2023: 1-4, 4 images.
- Frustaci, R.; The Safari Team, 2014. Meet Hogle Zoo's White rhinos. *The Safari* (Utah Zoological Society, Salt Lake City, Hogle Zoo Fall: 8, 3 images.
- Gordon, L.; Collier, S.; Behari, N.; Bondi-Kelly, E.; Boucher, P.; Ressijac, C.; Davies, A.; Tambe, M., 2023. Detecting rhino middens with computer vision and active learning: preliminary results. Report Association for the Advancement of Artificial Intelligence : pp. 1-5.
- Hannah, C.; Bohn, K., 2019. Two miracle Moms - First steps to saving the the Northern White rhino. Zoonooz (San Diego) 92 September: 30-31, 2 images.
- Hayashi, M.; Zywitza, V.; Naitou, Y.; Hamazaki, N.; Goeritz, F.; Hermes, R.; Holtze, S.; Lazzari, G.; Galli, C.; Stejskal, J.; Diecke, S.; Hildebrandt, T.B.; Hayashi, K., 2022. Robust induction of primordial germ cells of white rhinoceros on the brink of extinction. *Science Advances* 8 (49) eabp9683: 1-19 <https://www.science.org/doi/10.1126/sciadv.abp9683>.
- Horsman, R.B., 2016. Hope against extinction. Zoonooz (San Diego) 89 January: 2, 1 image.
- Humane Society International, 2021. Trophy hunting by the numbers, May 2021. Johannesburg, HSI, pp. 1-48.
- Kamuti, T., 2016. Private wildlife governance in a context of radical uncertainty: dynamics of game farming policy and practice in KwaZulu-Natal, South Africa. Thesis presented to the University of the Free State, pp. 1-427.



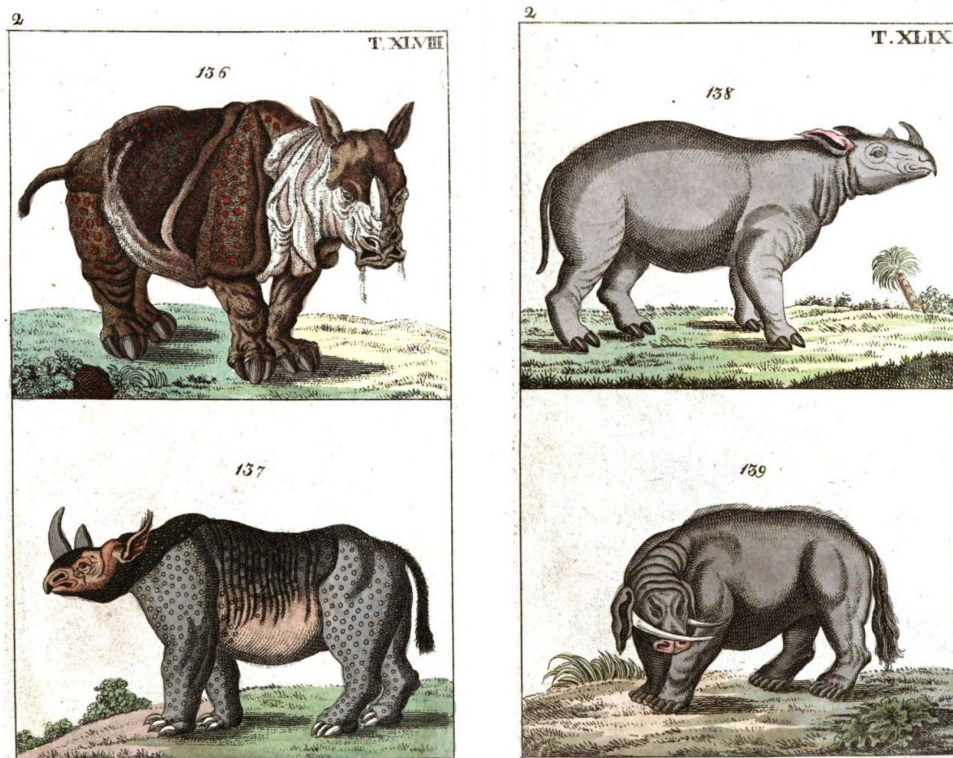
African Rhinos – continued

- Knight, M.; Mosweub, K.; Ferreira, S.M., 2022. African Rhino Specialist Group Chair report. *Pachyderm* 63: 17-32.
- Knight, M.; Mosweub, K.; Ferreira, S.M., 2022. Rapport du Groupe de Spécialistes du Rhinocéros d’Afrique. *Pachyderm* 63: 17-32.
- Kretzschmar, P.; Ganslosser, U.; Jewgenow, K.; Dehnhard, M., 2000. Non-invasive measurement of faecal testosterone metabolites revealed seasonality in free living White rhinoceros, *Ceratotherium simum simum*. *Advances in Ethology* 35, Supplements : 92.
- Leon, A., 2022. Wildlife protection and human-wildlife coexistence across the Lewa-Borana Landscape. Proceedings of the 47th National AAZK Conference Toronto, October 13-17: pp. 1-9.
- Little Rock Zoo, 2023. Little Rock Zoo, Arkansas, USA - Johari passed away on February 4th, 2023. (news from internet): 2 pp., 2 photos.
- McCleery, R.A.; Nhleko, Z.N.; Ahrens, R.; Ferreira, S.M., 2022. Poaching is directly and indirectly driving the decline of South Africa’s large population of white rhinos. *Animal Conservation* 25 (2): 168-169.
- Metrione, L. C., 2010. Relationships of Social Behavior and the Captive Environment to Reproduction in Female Southern White rhinoceros (*Ceratotherium simum simum*). Dissertation presented in partial fulfillment of the requirements for the Degree Doctor of Philosophy in the Graduate School of the Ohio University: 1-232.
- Miller, M.; Olea-Popelka, F.; Buss, P., 2022. Effect of boma confinement on hematologic and biochemical values in free-ranging White rhinoceros (*Ceratotherium simum*) in Kruger National Park, South Africa. *Journal of Wildlife Diseases* 58 (4): 735-745 - <https://doi.org/10.7589/JWD-D-22-00034>.
- Mtetwa, T.K.; Snelling, E.P.; Buss, P.; Zeiler, G.E.; Meyer, L.C.R., 2022. Reliability of pulse oximetry at four different attachment sites in immobilized white rhinoceros (*Ceratotherium simum*). *Veterinary Anaesthesia and Analgesia* 49: 650-655 - <https://doi.org/10.1016/j.vaa.2022.08.006>.
- Mulama, M.J.S, 2014. Habitat selection and distribution of Southern White rhinoceros (*Ceratotherium simum simum* Burchell 1817) translocated to Ol Pejeta Conservancy, Kenya . Doctoral thesis submitted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in Environmental Studies of University of Eldoret, Kenya: 1-107.
- Muntifering, J.R.; Malherbe, A.; Dax, L.; Beytell, P., 2023. From seeing to saving: How rhinoceros-based tourism in north-west Namibia strengthens local stewardship to help combat illegal hunting. *Frontiers in Sustainable Tourism* 1.1090309 with supplementary material: 1-10, 5 figs. DOI: 10.3389/frsut.2022.1090309.
- Patton, F.J.; Campbell, P.E.; Genade, A., 2022. Aspects of white rhino movement over a 12-month period based on hourly GPS location data. *Pachyderm* 63: 207-214.
- Reid, C.E.; Versteeg, L.; Ludwig, A.; Hermes, R., 2012. Analysis of the European captive Southern White rhinoceros (*Ceratotherium simum simum*) using the International Studbook for the African White rhinoceros 2001-2004 and integrating reproductive health findings. *International Zoo Yearbook* 46 : 209-212, 4 figs, 3 tabs, DOI:10.1111/j.1748-1090.2011.00164.x.
- Rookmaaker, L.C., 2022. Rhinoceros borili Blyth, 1870, a forgotten name for the black rhinoceros. *Pachyderm* 63: 198-200, fig. 1.



African Rhinos – continued

- Rowan, A.N., 2023. Rhino Conservation in Africa. *WellBeing News* 5 (1) article 2 (3 Feb 2023): 3 pages, 2 images
<https://www.wellbeinginstituteintlstudiesrepository.org/wbn/vol5/iss1/2>.
- Ruggeri, E.; Klohonatz, K.; Korody, M.; Sirard, M.; Coleman, S., 2022. Cross-species transcriptomic analysis of mural granulosa cells between the southern white rhinoceros, human, and cattle. *Reproduction, Fertility and Development* 35 (2): 137138 - <https://doi.org/10.1071/RDv35n2Ab24>.
- Ruggeri, E.; Young, C.; Ravid, N.; Durrant, B., 2022. Nuclear and cytoskeletal analysis of southern white rhinoceros (*Ceratotherium simum simum*) arrested presumptive zygotes following intracytoplasmic sperm injection. *Reproduction, Fertility and Development* 35 (2): 137 - <https://doi.org/10.1071/RDv35n2Ab23>.
- Ryder, O.A.; Korody, M.; San Diego Zoo Global, 2020. Stems cells to the rescue. *Zoonooz* (San Diego) 93 November: 14-17, 7 images.
- Save The Rhino International, 2023. Poaching crisis in KwaZulu-Natal. *Oryx* 57 (1) Jan: 6 - savetherhino.org/africa/poaching-in-crisis-in-kwazulu-natal.
- Schimdt, C.; Sachser, N., 2000. Effects of food dispersal, translocation and panic on salivary corticosterone concentrations in the White rhinoceros. *Advances in Ethology* 35, Supplements: 113.
- Sekulovich, M., 2018. Ian Craig 2017 Conservation Medalist - Lifetime Achievement Award. *Zoonooz* (San Diego) 91 January: 25, 2 images.
- Somerville, K.; Save The Rhino International, 2023. Poaching in Namibia almost doubles in 2022. *on-line News* 1 Feb 2023 : 5 pages, 3 images
savetherhino.org/africa/namibia/poaching-in-namibia-almost-doubles-in-2022/.
- Stanbridge, D.; O'Riain, M.J.; Dreyer, C.; Le Roex, N., 2022. Genetic restoration of black rhinoceroses in South Africa: conservation implications. *Conservation Genetics* 2022.
- Tubbs, C.; Felton, R.; Bohn, K., 2020. When hormones are disrupted. *Zoonooz* (San Diego) 93 September: 14-17, 6 images.
- Vigne, L., 2022. Tribute to Tony Fitzjohn. *Pachyderm* 63: 220-221.
- Weber, J.; Bohn, K., 2016. From the heart - Nikita Kahn Rhino Rescue Center. *Zoonooz* (San Diego) 89 July: 26-27, 2 images.
- Weston, J.; The Safari Team, 2012. Princess, the female White rhinoceros. *The Safari* (Utah Zoological Society, Salt Lake City, Hogle Zoo 2013 calendar, : front cover, 1 image.
- Willis, D., 2022. Tribute to Richard Leakey. *Pachyderm* 63: 217-219.
- Worley, K.E., 2016. You and the Zoo - Nola the Northern White rhino. *Zoonooz* (San Diego) 89 March: unpaginated, 1 image.
- Worley, K.E.; San Diego Zoo Global, 2016. 100 years of the San Diego Zoo - Northern White rhinos arrive (1989). *Zoonooz* (San Diego) 89 September: 24-25, 6 images.
- Worley, K.E.; San Diego Zoo Global, 2016. 100 years of the San Diego Zoo - Rallying for rhinos. *Zoonooz* (San Diego) 89 November: 40-42, 5 images.
- Zhou Jinfeng; Wang Haibin; Wong Linda; An Qinqin; Zhang Ming; Xu Yanjun, 2021. A preliminary report on African rhino status in China. Beijing, China Biodiversity Conservation and Green Development Foundation, pp. 1-8.



1832 Wilhelm plate 48, 49 Unterhaltungen aus der Naturgeschichte

NEW PUBLICATIONS ON ASIAN RHINOS

- Aryal, N.; Pathak, A.; Nepal Department of National Parks & Wildlife Conservation, 2022. Transboundary rescue operation of greater one horned rhinoceros (an exemplary effort of Chitwan National Park, Chitwan, Nepal). Kathmandu, Department of National Parks & Wildlife Conservation, pp. 1-46.
- Ashraf, M.; Saikia, A.; Sharma, S., 2022. Legacy of co-existence between rhino and people in a protected area in India. *Environmental Challenges* 9 (100539): 1-10 - <https://doi.org/10.1016/j.envc.2022.100639>.
- Balmford, A., 2022. Book Review: The hairy rhinoceros by John Payne. *Pachyderm* 63: 215-216.
- Bandelloni, A. (English adapt.), 2020. The "Grotta degli Animali" in the Villa Medicea di Castello: 2 pp, 3 figs.
- Bhutan Government, 2021. Forest and nature conservation bill of Bhutan. Timphu, pp. 1-78.
- Bohn, K., 2022. Last look - Indian rhinoceros calf - "Taj". *Journal (San Diego Zoo Wildlife Alliance)* 2 (5) Sept-Oct: 29, 1 image.
- Chodynski, A.R., 2020. Dzielo M.B. Valentiniego Museum museum i inne publikacje muzeograficzne z gdanskich ksiegobiorow oraz ich znaczenie w ksztaltowaniu zbiorow przyrodniczych i artystycznych w XVII i XVIII wiek. *Opuscula Musealia* 27: 131-167.
- Choudhury, A., 2022. Towards a new rhino conservation landscape in Assam for the increasing population of the greater one-horned rhino (*Rhinoceros unicornis*). *Pachyderm* 63: 179-182.
- Debnath, T.; Sarkar, T., 2021. Bag size, record specimen and masculinity: an analysis of the hunting diary of Maharaja Nripendra Narayan of the princely state of Cooch Behar. *Sidho Kanho Birsha University Journal of History* 1 (1): 13-47.



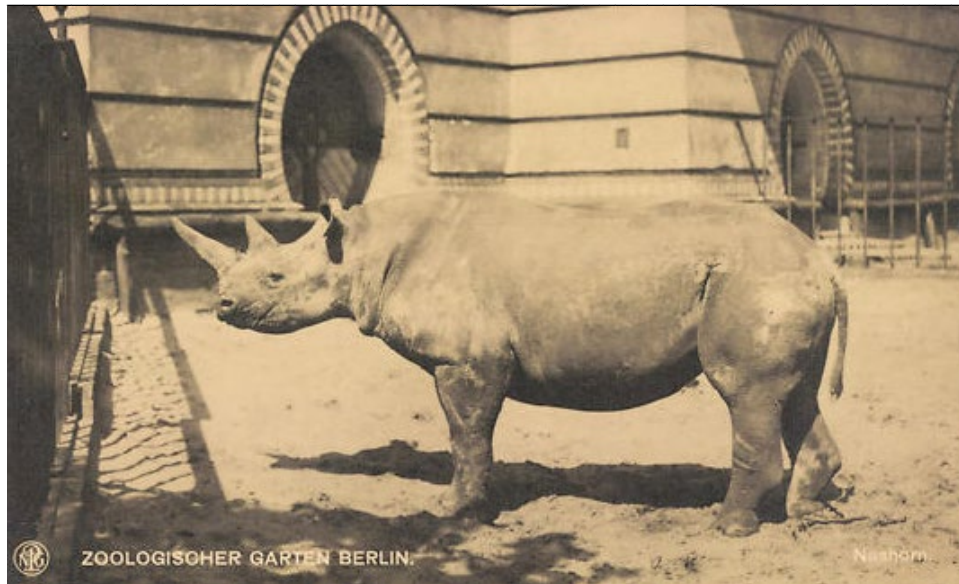
Asian Rhinos – continued

- Duadji, N.; Tresiana, N.; Putri, A.M.L.S.; Riniarti, M., 2022. Can the implementation of Conservation Village increase environmental support in forest management in Bukit Barisan Selatan National Park, Lampung, Indonesia?. *International Journal for Sustainable Development and Planning* 17 (3) June 2022: 751-763, 3 tables, 11 figures, <https://doi.org/10.18280/ijstdp.170306>.
- Globescan, 2018. USAID research study: consumer demand for elephant, rhino and pangolin parts and products in Vietnam. New York, pp. 1-149.
- Handayani, H.; Setia, T.M., 2022. Preferensi pakan Badak Sumatera (*Dicerorhinus sumatrensis*) di Suaka Rhino Sumatera (SRS) Taman Nasional Way Kambas (TNWK) Lampung. *Prosiding Seminar Nasional Biologi* 8 (1): 522-526, 3 tables.
- Hays, D.L., 2002. Francesco Bettini and the pedagogy of garden design in eighteenth-century France. In Hunt, J.D. & Conan, M. (Eds.), *Tradition and Innovation in French Garden Art: Chapters of a New History*, pp. 93-120.
- Hegner, K., 2018. Zur Geschichte und Funktion der Gemäldekopien in den grossherzoglichen-mecklenburgischen Kunstsammlungen. In: Putzger, A.; Heisterberg, M.; Müller-Bechtel, S., *Nichts Neues schaffen: Perspektiven auf die treue Kopie 1300-1900*. Berlin, pp. 191-213.
- Hussain, I.F.; Borah, J.; Talukdar, B.K., 2023. D.E.T.E.R.-ring Wildlife Crime. *Oryx* 57 (1) Jan: 12.
- International Rhino Foundation, 2023. Third Asian Rhino Range countries meeting concludes Declaration outlining priorities for Rhino Conservation. IRF on-line-Blog 10 February 2023: 11 pages, 6 images <https://rhino.org/blog/>.
- Kohout, D.; Stoops, M.; Ellis, S., 2019. Henry Doorly Zoo proudly announces historic birth of endangered Indian rhino calf. On-line press release 2019 Sept 4: 2, 1 image.
- Krueger, P.F.; Chakkarath, P., 2022. Ein Nashorn auf Reisen: Bilder von Indien als Vehikel von Bildung und Einbildung (Editorial). *Psychosozial* 45 (170): 5-8.
- Maffei, S., 1751. Osservazioni sul 'Rinoceronte. Manuscript in Biblioteca Capitolare Veronese. B. IV, n.3, pp. 1-4.
- Menegon, E., 2006. New knowledge of strange things: exotic animals from the West. *Disquisitions on the Past and Present* 15: 39-48.
- Nath, N.; Sahariah, D.; Meraj, G.; Debnath, J.; Kumar, P.; Lahon, D.; Chand, K.; Farooq, M.; Chandan, P.; Singh, S.K.; Kanga, S., 2023. Land use and Land cover change monitoring of an UNESCO World Heritage Site: Kaziranga Eco-Sensitive Zone using Cellular Automata-Markov Model. *Land* 2023 www.mdpi.com/journal/land 12 (1): 1-21, <https://doi.org/10.3390/land12010151>.
- Parker, B.G.; Khanyari, M.; Ambari, H.; Buuveibaatar, B.; Kabir, M.; Khanal, G.; Mirzadeh, H.R.; Onon, Y.; Farhadinia, M.S., 2023. A review of the ecological and socioeconomic characteristics of trophy hunting across Asia. *Animal Conservation* 2023: - <https://doi.org/10.1111/acv.12840>.
- Pushie, M., 2022. A mask fit for a princess (at Utah's Hogle Zoo). *Proceedings of the 47th National AAZK Conference Toronto, October 13-17*: pp. 38-46.
- Putro, Haryanto R., 2023. Pendekatan baru konservasi Badak Jawa (*Rhinoceros sondaicus* Desmarest 1822). *Policy Brief* 2023: 1-5.
- Rajak, S.; Deo, S.G.; Saha, S., 2020. Rock art at Isko in Hazaribagh District, Jharkhand: Anthropological perspective. *Heritage: Journal of Multidisciplinary Studies in Archaeology* 8: 1041-1058.



Asian Rhinos – continued

- Ridley, G., 2022. Art and merchandise, followers and fragility: creating the blueprint for animal celebrity. In: Nachumi, N.; Straub, K., Making stars: biography and celebrity in eighteenth-century Britain. Newark, University of Delaware Press, pp. 148-176 - <https://doi.org/10.2307/j.ctv2v55gms.11>.
- Rochmyaningsih, D; Meijaard, E., 2022. Indonesia tightens grip on conservation science. *Science* 378 (6616) 14 Oct 2022: 120-121, 1 image, <https://www.science.org/doi/10.1126/science.adf.2879>.
- Rookmaaker, L.C.; Edwards, John, 2022. The rhinoceros on terracotta temples and in jungles of West Bengal and Bangladesh. *Journal of Bengal Art* 26 (dedicated to Claudine Bautze-Picron): 71-88.
- Saha, S.; Rajak, S., 2019. Digital documentation of rock art site of Isko, Hazaribagh, Jharkhand. *Heritage: Journal of Multidisciplinary Studies in Archaeology* 7: 493-506.
- Sharma, A., 2022. The population status of the greater one-horned rhino in India and Nepal, and the importance of regular monitoring census intervals. *Pachyderm* 63: 176-178.
- Szydlowski, M., 2022. Renegotiating citizenship: stories of young rhinos in Nepal. *Journal of Ecotourism* 2022: 1-18 - <https://doi.org/10.1080/14724049.2022.2139833>.
- Talukdar, B.K., 2022. Asian Rhino Specialist Group Chair report. *Pachyderm* 63: 33-37.
- Talukdar, B.K., 2022. Rapport du Groupe de Spécialistes du Rhinocéros d'Asie. *Pachyderm* 63: 33-37.
- Teixeira, D.M., 2022. Os animais do novo mundo figurados na "Arca de Noé sobre o Monte Ararat" de Simon de Myle (1570): um estudo das fontes iconográficas. *Arquivos de Zoologia* 53 (2): 11-31 - DOI: 10.11606/2176-7793/2022.53.02.
- Troia, P. De, 2022. Real and unreal animals in Jesuit geographical works in China: a research note. *Sulla Via del Catai, Rivista scientifica semestrale del Centro Studi Martini Martini* no. 26: 123-155.
- Utari, E.; Wahyuni, I.; Fadhilah, R.N., 2022. Diversity of large mammals in Ujung Kulon National Park. *Indonesian Journal of Biology Education* 5 (2): 19-31, 9 figs, 6 tabs, <http://dx.doi.org/10.31002/ijobe.5i2.5991>.
- Whitlatch, C.; Fascione, N., 2022. Birth of Sumatran rhinoceros (*Dicerorhinus sumatrensis*) in Way Kambas National Park. *Pachyderm* 63: 205-206.
- Yadava, M.K., 2022. In Assam, a horn has value only on a living rhino. *Pachyderm* 63: 201-204.
- Zainuddin, Z.Z.; Payne, J., 2022. Sabah Ficus Germplasm Centre (SFGC), Tabin Wildlife Reserve, Sabah. *Malayan Nature Journal* 74 (3): 401-405b, 1 table.
- Zywitza, V.; Frahm, S.; Krueger, N.; Drukker, M.; Hildebrandt, T.B.; Diecke, S.; Weise, A.; Goeritz, F.; Hermes, R.; Holtze, S.; Colleoni, S., 2022. Induced pluripotent stem cells and cerebral organoids from the critically endangered Sumatran rhinoceros. *iScience* 25, 105414 Nov 18, 2022: 1-16, 3 figures with supplementary material, <https://doi.org/10.1016/j.isci.2022.105414>.



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NEW PUBLICATIONS ON FOSSIL RHINOS

Section edited by Emmanuel Billia, Dan Ziegler and Athanassios Athanassiou.

- Baquedano, E.; Arsuaga, J.L.; Perez-Gonzalez, A.; LaPlana, C.; Marquez, B.; Huguet, R.; Gomez-Soler, S.; Villaescusa, L.; Galindo-Pellicena, M.A.; Rodriguez, L.; Garcia-Gonzalez, R., 2023. A symbolic Neanderthal accumulation of large herbivore crania. *Nature Human Behavior* 26 Jan 2023 with extended data and supplementary material: 1-23, <https://doi.org/10.1038/s41562-022-01503-7>.
- Billia, E.M.E.; Zervanová, J., 2022. Further reports of *Stephanorhinus kirchbergensis* (Jäger, 1839) (Mammalia, Rhinocerotidae) from Eurasia – Addenda 5. *Gortania – Geologia, Paleontologia, Paleontologia* 44: 5-13, 7 figs - <https://doi.org/10.57614/GORT20380410.2022.44.1>
- Boschian, G., 2022. Rinoceronti a Visogliano - L'ambiente e le grotte di *Homo heidelbergensis* [Rhinoceroses at Visogliano - The environment and the caves of *Homo heidelbergensis*] [in Italian] Gruppo Speleologico Flondar (first edition): 103 pp., with illustrations.
- Ceruleo, P.; Rolfo, M.F.; Petronio, C.; Salari, L., 2021. Review of Middle Pleistocene archaeological and biochronological data in Malagrotta - Ponte Galeria area (Rome, Central Italy). *Atti della Società Toscana di Scienze Naturali, Pisa; Memorie, Serie A*, vol. CXXVIII: 85-103, 4 figs, 1 tab [doi: 10.2424/ASTSN.M.2021.22].
- Deng, T.; Lu, X.; Sun, D.; Li, S., 2023. Rhinocerotid fossils of the Linxia Basin in northwestern China as late Cenozoic biostratigraphic markers. *Palaeogeography, Palaeoclimatology, Palaeoecology* 614 (March) article 111427: 1-13, 4 figs. <https://doi.org/10.1016/j.palaeo.2023.111427>.
- Diedrich, C.G., 2022. Extinct Eurasian rhinoceros *Coelodonta* and *Stephanorhinus* dental pathologies and tooth change modus. *Quaternary Science Reviews* 301 (107922): 1-9 - <https://doi.org/10.1016/j.quascirev.2022.107922>.
- Hullot, M.; Merceron, G.; Antoine, P-O., 2023. Spatio-temporal diversity of dietary preferences and stress sensibilities of early and middle Miocene Rhinocerotidae from Eurasia: impact of climate changes. *Peer Community Journal* 3 2023 article e5: 1-29, 6 figs, 6 tabs [<https://doi.org/10.24072/pcjournal.222>].



Fossil Rhinos – continued

- Pandolfi, L., 2022. A critical overview on Early Pleistocene Eurasian *Stephanorhinus* (Mammalia, Rhinocerotidae): Implications for taxonomy and paleobiogeography. *Quaternary International* 2022: <https://doi.org/10.1016/j.quaint.2022.11.008>.
- Pandolfi, L., 2023. Reassessing the phylogeny of Quaternary Eurasian Rhinocerotidae. *Journal of Quaternary Science* 2023 : 1-4, 3 figures, DOI:10.1002/jqs.3496.
- Pandolfi, L.; Martino, R., 2023. Taxonomy and phylogeny of the smallest Miocene rhinocerotid *Parvorhinus* n. gen. (Mammalia, Rhinocerotidae). *Palaeoworld*: <https://doi.org/10.1016/j.palwor.2023.01.009>.

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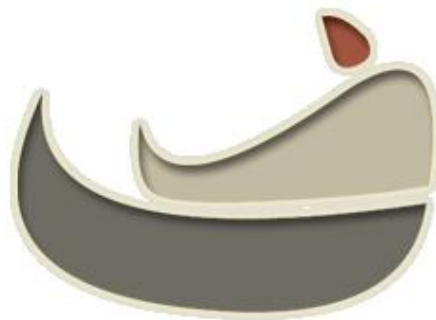
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