

RHINO RESOURCE CENTER

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NEWSLETTER #40 SEPTEMBER 2015

Dear colleagues and friends,

This is the 40th issue of the quarterly e-newsletter of the Rhino Resource Center.
Edited by Dr Kees Rookmaaker.

The total number of references in the collection of the RRC now stands at 19,636. This is an increase of 390 items in the last quarter.
Over 19,314 references are available as PDF on RRC website



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The Rhino Resource Center is a Charity (Registered KvK Utrecht 30185802)
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THIS IS THE RRC'S NEWSLETTER

no. 40

A SERVICE TO THE RHINO COMMUNITY FOR 10 YEARS

It is a proud moment for me to say that the RRC has been able to serve the global rhino community for a decade, 10 years of work that is reflected by the increased extent of the website and underlying database. In those ten years, we have added about 10,000 new references and other text, fully supported and archived. That is then a thousand new items per year, 3 per day, every day for this past decade.

Of course, such a tradition of service is impossible without assistance. There is a dedicated group of volunteer specialist editors, there are the board members overseeing this small registered charity, there is the expertise of our webmaster, and of course our equally dedicated set of sponsors who have not let us down over the years. Furthermore a long list of regular or incidental correspondents who have sent information and helped to achieve near-completeness in coverage. As Chief Editor, I can only say a big THANK YOU to all who have contributed.

All previous newsletters are of course online, and from number 1 to 40 can be found on the RRC website [here](#).

To archive and preserve the existing knowledge about all species of rhinoceros is an important function of the RRC. The internet is improving and expanding at an incredible rate, but many websites have disappeared, many have changed and deleted content, and unfortunately the pre-internet research is often hard to come by except through traditional visits to libraries and bookshops. The RRC saves cost for many researchers and media writers. It is not common to acknowledge use of internet sites in published papers and books – if only authors would know how much it means to see efforts rewarded.

Kees Rookmaaker



CALL FOR COMMISSIONERS OF THE INTERNATIONAL COMMISSION ON ZOOLOGICAL NOMENCLATURE

Following the partial move of the ICZN Secretariat to Singapore, Kees Rookmaaker and Martyn Low have been appointed as Secretary and Assistant Secretary. There is now a call for new commissioners:

New Commissioners of the International Commission on Zoological Nomenclature (ICZN) will be elected during the IUBS Congress in Berlin in December 2015. Practicing taxonomists with a strong background and publication record in taxonomy and nomenclature are invited to apply. It is equally important that candidates are proactive in their involvement with the Commission, particularly in terms of re-defining the role of the Commission in the 21st Century. Candidates are invited to fill in the form (available [here](#)) and return it to the ICZN Secretariat (icznsec@nus.edu.sg) before 1 October 2015.

We look forward to see many nominations. But be quick, the deadline is near.



Rhino in Minden

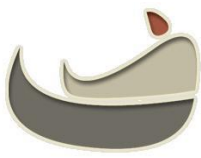
This is an oak choir stall from 1520 found in the high church of St. Martini in Minden, Germany. Photo by Jim Monson. More information is [here](#).

NEWSLETTER DATES

From the humble start in November 2005 through 37 issues, I have produced the RRC Newsletter in 3-month intervals from 1 November. I now find that it better fits academic holidays to send the newsletters out one month later than usual, so the new dates are:

1 MARCH – 1 JUNE – 1 SEPTEMBER – 1 DECEMBER

The RRC will continue to provide information on everything written about the rhinoceros in scientific and popular literature for all interested in rhinos.



SAVING THE SUMATRAN RHINO – NOT QUITE TOO LATE

Two important papers were published this quarter.

[Nardelli](#), F., 2014. The last chance for the Sumatran rhinoceros? *Pachyderm* 55: 43-53
This is a personal cry for help of the Italian rhino specialist Francesco Nardelli.

[Havmøller](#), R.G.; Payne, J.; Ramono, W.; Ellis, S.; Yogana, K.; Long, B.; Dinerstein, E.; Christy Williams, C.; Putra, R.; Gawi, J.; Talukdar, B.K.; Burgess, N., 2015. Will current conservation responses save the Critically Endangered Sumatran rhinoceros *Dicerorhinus sumatrensis*? *Oryx* 2015: (5 pp.) - [doi:10.1017/S0030605315000472](https://doi.org/10.1017/S0030605315000472)

The long list of authors reads like a who's who of Asian rhino conservation and for that reason alone the paper is worth close attention. All parties, NGOs and governments will need to come together because the question mark at the end of the title is a treathening one. Here are the authors;

Rasmus Gren Havmøller - Natural History Museum of Denmark, Centre for Macroecology, Evolution & Climate, Copenhagen, Denmark

Junaidi Payne - Borneo Rhino Alliance (BORA), Kota Kinabalu, Sabah, Malaysia

Widodo Ramono - Yayasan Badak Indonesia, Bogor, Java, Indonesia

Susie Ellis - International Rhino Foundation, Strasburg, Virginia, USA

K. Yoganand - WWF-Malaysia, Kota Kinabalu, Sabah, Malaysia

Barney Long - WWF, Washington, DC, USA

Eric Dinerstein - WWF, Washington, DC, USA

A. Christy Williams - WWF-International, Gland, Switzerland

Rudi H. Putra - Leuser Conservation Forum, Banda Aceh, Aceh, Indonesia

Jamal Gawia = Leuser International Foundation, Banda Aceh, Aceh, Indonesia

Bibhab Kumar Talukdar - IUCN Species Survival Commission Asian Rhino Specialist Group, Guwahati, Assam, India

Neil Burgess - United Nations Environment Programme World Conservation Monitoring Centre, Cambridge, UK

If they had added one author, they could have avoided some oddities in the map of historical distribution which is a major centre-piece of the paper if not of the content.

Here is the abstract:

The Critically Endangered Sumatran rhinoceros *Dicerorhinus sumatrensis* formerly ranged across South-east Asia. Hunting and habitat loss have made it one of the rarest large mammals and the species faces extinction despite decades of conservation efforts. The number of individuals remaining is unknown as a consequence of inadequate methods and lack of funds for the intensive field work required to estimate the population size of this rare and solitary species. However, all information indicates that numbers are low and declining. A few individuals persist in Borneo, and three tiny populations remain on the Indonesian island of Sumatra and show evidence of breeding. Rhino Protection Units are deployed at all known breeding sites but poaching and a presumed low breeding rate remain major threats. Protected areas have been created for the rhinoceros and other in situ conservation efforts have increased but the species has continued to go locally extinct across its range. Conventional captive breeding has also proven difficult; from a total of 45 Sumatran rhinoceros taken from the wild since 1984 there were no captive births until 2001. Since then only two pairs have been actively bred in captivity, resulting in four births, three by the same pair at the Cincinnati Zoo and one at the Sumatran Rhino Sanctuary in Sumatra, with the sex ratio skewed towards males. To avoid extinction it will be necessary to implement intensive management zones, manage the metapopulation as a single unit, and develop advanced reproductive techniques as a matter of urgency. Intensive census efforts are ongoing in Bukit Barisan Selatan but elsewhere similar efforts remain at the planning stage.



NEW RHINOCEROS DRAWINGS BY PETRUS CAMPER

An exciting project undertaken by the University of Göttingen is analyzing the correspondence of Johann Friedrich Blumenbach (1752–1840), Professor of Medicine and Natural History. As part of this effort, Alexander Gehler of the GZG Museum (Geoscience Museum Göttingen) spotted drawings sent to Blumenbach by his friend Petrus Camper, the Professor of Anatomy at the University of Groningen. Camper was an early expert on rhinoceros anatomy and taxonomy, and probably the first to realize the difference between *Rhinoceros unicornis* and *Rhinoceros sondaicus* (see my paper on this [here](#)). Camper's classification never appeared fully in print due to his sudden death, but vestiges remain. His correspondence with Blumenbach will most likely provide some much-needed clues to a fuller understanding of this episode of taxonomic and nomenclatorial history.

This also exemplifies that the RRC contains much unique content and will remain a gold mine for future student of rhinoceros conservation and biology.



Drawing of the skull of a Javan rhinoceros by Petrus Camper, and sent to Johann Friedrich Blumenbach in Göttingen. "Rhinoceros cranium a. parte antica. Magnitudine ad 1/4 reducta. P. Camper del." Copyright GZG Museum (Geoscience Museum Göttingen).



OUR SPONSORS

The board and staff of the Rhino Resource Center gratefully acknowledge the support of our two main sponsors, the International Rhino Foundation and SOS Rhino.

A generous donation was received from the WWF Areas Programme.



INTERNATIONAL RHINO FOUNDATION



SOS RHINO



WWF AREAS

We receive regular donations from Save the Rhino International and Rhino Carhire.



SAVE THE RHINO



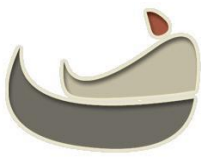
RHINO CARHIRE

We are grateful to all individuals who donate to the RRC to show their appreciation of our work.

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	2014 November	2015 March	2015 June	2015 September	ANNUAL INCREASE
References	18,861	19,134	19,524	19,634	+ 773
PDF files	18,431	18,759	19,195	19,313	+ 882
Images	3,464	3,516	3,578	3,613	+ 149
Members	2,108	2,193	2,388	2,482	+ 374

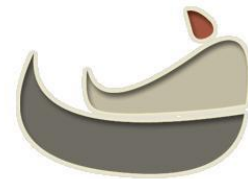
I thank everybody who has helped us by sending copies of books and papers.

All contributions are [acknowledged on the website](#).

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 (finalised 30 August 2015)

In this quarter (June to August 2015), we have added 110 new references, to bring the total number of items in the database to 19,634.

Of these, 19,313 or 98 percent are available as PDF and searchable.

Below I have listed new entries published in the 21st century in four categories: General (all species), African rhinos, Asian rhinos and Fossil rhinos.

**This quarter saw the publication of some pivotal papers and reports,
all well worth the attention for anybody interested in rhinos.
Search for them on the RRC, it's easy.**

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

GENERAL PUBLICATIONS

- Anonymous, 2015. Printed rhino horn. *New Scientist* 226 (9 May 2015): 7.
- Harding, L., 2013. Wildlife poaching increasing. *Taprobanica: The Journal of Asian Biodiversity* 5 (1): 1-5.
- Heitmann, E., 2014. A horn of contention: An analysis of the viability of a legalised trade in rhino horn. Dissertation presented to the University of Cape Town, pp. 1-85.
- Martin, E.B., 2015. What is the future of the Chinese ivory industry after China's latest moves? *Swara*, Nairobi July-September 2015: 18-19.
- Martin, E.B.; Vigne, L., 2015. Hong Kong's ivory: more items for sale than in any other city in the world. London, Save the Elephants, pp. 1-67.
- Pelley, J., 2012. Rhino horn drug leads to poaching. *Frontiers in Ecology and the Environment* 10 (8): 404.
- Wich, S., 2015. Drones and conservation. In: *Drones and aerial observation: New technologies for property rights, human rights, and global development*. New America, pp. 63-71.

NEW PUBLICATIONS ON AFRICAN RHINOS

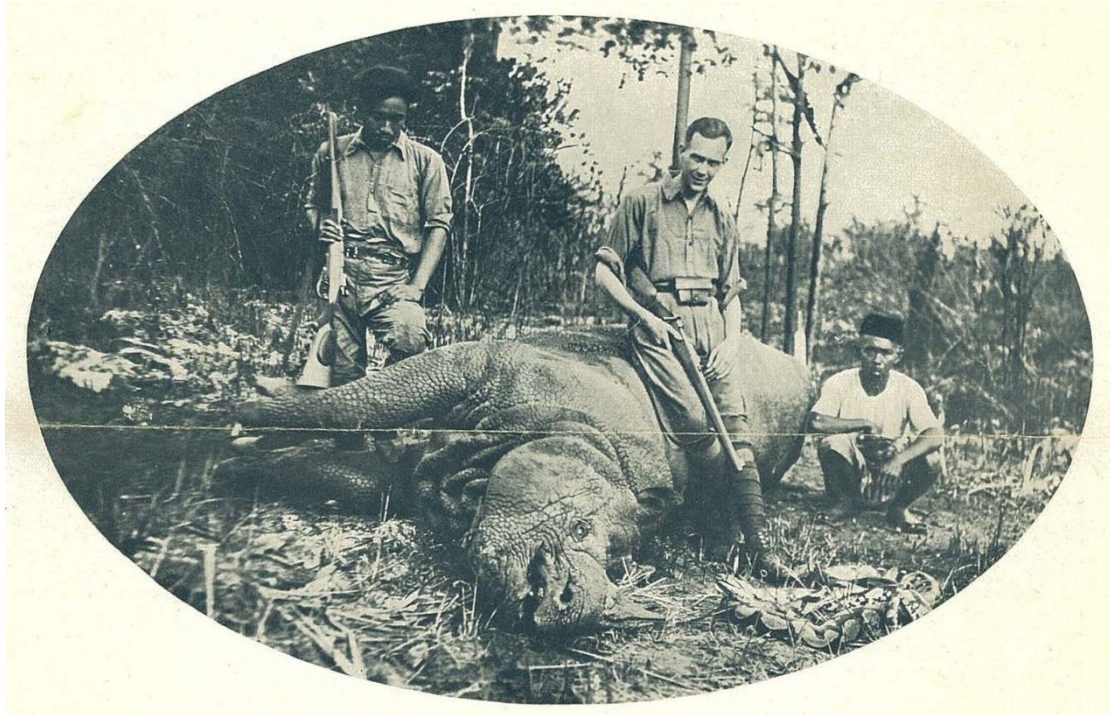
- Anonymous, 2013. Breitmaulnashorn-Baby in australischem Zoo geboren. *Frankfurter Rundschau*, 21. Mai 2013: 1, 4 photos.
- Buss, P.; Olea-Popelka, F.; Meyer, L.; Hofmeyr, J.; Mathebula, N.; Kruger, M.; Brüns, A.; Martin, L.; Miller, M., 2015. Evaluation of cardiorespiratory, blood gas, and lactate values during extended immobilization of white rhinoceros (*Ceratotherium simum*). *Journal of Zoo and Wildlife Medicine* 46 (2): 224-233.
- Ferreira, S.M.; Greaver, G.; Knight, G.A.; Knight, M.H.; Smit, I.P.J.; Pienaar, D., 2015. Disruption of rhino demography by poachers may lead to population declines in Kruger National Park, South Africa. *PLoS ONE* DOI:10.1371/journal.pone.0127783 [29 June]: 1-18.
- Glenn, C.; Taylor, J.P.; Clottes, J., 2012. Rhinoceros - or elephant. *Archaeology* 65 (2): 8.



African Rhinos – continued

- Gripper, J., 2014. Notes on the work in Sebakwe, Zimbabwe. *Sebakwe News* 2014 Winter: 1-18.
- Kolle, G., 2014. Der Dortmunder Zoo hat sein erstes Nashorn-Baby. *WAZ*, 24 April 2014.
- Law, P.R.; Fike, B.; Lent, P.C., 2015. Dynamics of an expanding black rhinoceros (*Diceros bicornis minor*) population. *European Journal of Wildlife Research* 61 (4): 601-609.
- Merz, A., 2007. Canned lion hunting. *Farmer* 22 June 2007: 10.
- Merz, A., 2009. The rhino horn issue (letter of the month). *Farmer* 30 January 2009: 9.
- Miller, M.; Hewlett, J.; Hofmeyr, J.; Buss, P., 2015. Rescue of orphan white rhinoceros calves in South Africa. *Vetcom* 54: 40-42.
- Rhino Ark, 2015. Various notes on Aberdares, Kenya. *Arkive, the newsletter of the Rhino Ark* no. 46: 1-24
- Schmidt, C.K., 2015. Rhino and human detection in overlapping RGB and LWIR images. Exam paper presented to Linköpings Universitet, pp. 1-67.
- Schook, M.W.; Wildt, D.E.; Raghanti, M.A.; Wolfe, B.A.; Dennis, P.M., 2015. Increased inflammation and decreased insulin sensitivity indicate metabolic disturbances in zoo-managed compared to free-ranging black rhinoceros (*Diceros bicornis*). *General and Comparative Endocrinology* 217–218: 10-19.
- Strydom, D., 2014. Protecting the rhino. *Sebakwe News* 2014 Winter: 2-3.

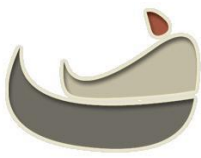




Hazewinkel, when the javan rhino still roamed sumatra

NEW PUBLICATIONS ON ASIAN RHINOS

- Adhikari, K., 2015. Ecology, demography, conservation and management of greater one horned rhinoceros (*Rhinoceros unicornis*) in Chitwan National Park, Nepal. Thesis submitted to Saurashtra University, Rajkot, India, pp. 1-186.
- Anonymous, 2015. Names of rhinos found on camera traps in Ukung Kulon. Ujung Kulon NP.
- Basel Zoo; Houwald, F.von; Pagan, O.; Rieches, R., 2014. International studbook for the greater one-horned or Indian rhinoceros, *Rhinoceros unicornis*, 31 December 2014. Basel, Zoologischer Garten, pp. 1-63.
- Borneo Rhino Sanctuary (BRS) Programme, 2015. Six-monthly report (no.21-22): covering the period January-June 2015. Kota Kinabalu, Borneo Rhino Alliance, pp. 1-7.
- Deka, R.J. ; Sarma, N.K., 2015. Studies on feeding behaviour and daily activities of *Rhinoceros unicornis* in natural and captive condition of Assam. *Indian Journal of Animal Research* 49 (4): 542-545.
- Havmoller, R.G.; Payne, J.; Ramono, W.; Ellis, S.; Yogana, K.; Long, B.; Dinerstein, E.; Christy Williams, C.; Putra, R.; Gawi, J.; Talukdar, B.K.; Burgess, N., 2015. Will current conservation responses save the Critically Endangered Sumatran rhinoceros *Dicerorhinus sumatrensis*? *Oryx* 2015: (5 pp.) - doi:10.1017/S0030605315000472.
- Ojah, S.; Saikia, A.; Sivakumar, P., 2015. Habitat suitability of Laokhowa Burhachapori wildlife sanctuary complex of Assam, India for *Rhinoceros unicornis* Linn. *Clarion: Multidisciplinary International Journal* 4 (2): 39-47.



Asian Rhinos – continued

Rahmaningsih, M.D., 2013. Penyusunan desain wisata minat khusus berdasarkan pola pergerakan badak jawa di Taman Nasional Ujung Kulon. Thesis presented to University of Bogor, pp. 1-95.

NEW PUBLICATIONS ON FOSSIL RHINOS

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

Bacon, A-M.; Düringer, Ph.; Antoine, P-O.; Demeter, F.; Shackelford, L.; Sayavongkhamdy, Th.; Sichanthongtip, Ph.; Khamdalavong, Ph.; Nokhamaomphu, S.; Sysupanh, V.; Patole-Edoumba, E. & two others, 2010. The Middle Pleistocene mammalian fauna from Tam Hang karstic deposit, northern Laos – New data and evolutionary hypothesis. *Quaternary International* 2010: 1-18, 17 figs, 6 tabs [doi:10.1016/j.quaint.2010.11.024].

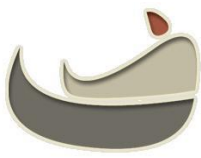
Bayshashov, B.U.; Tyut'kova L.A., 2010. Biozonal'naya posledovatel'nost' miozenovykh faun pozvonochnykh Yugo-Vostochnogo Kazakhstana [in Russian]. Proc. of IV IPA Inter. Symp. "Evolution of Life on the Earth", Tomsk, November 10-12 2010, TML-Press, Tomsk; 4: 526-528.

Casanovas-Vilar, I.; Moyà-Solà, S.; Agustí, J.; Köhler, M., 2005. The geography of a faunal turnover: tracking the Vallesian Crisis. In Elewa A.M.T., ed: *Migration of Organisms – Climate – Geography – Ecology*, Springer Verlag: pp. 247-300.

Codrea, V.A.; Ratoi, B.G., 2014. The early Upper Miocene *Aceratherium incisivum* (Mammalia: Rhinocerotidae) from Bozieni (Moldavian Platform, Romania). *North-western Journal of Zoology*, Oradea, Romania; 10 (1): 138-142.

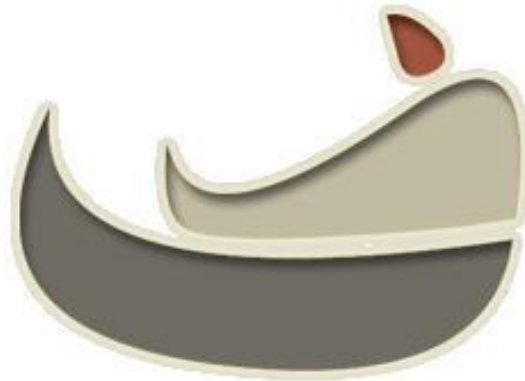
Deng, Tao, 2006. Chinese Neogene mammal biochronology. *Vertebrata Palasiatica*, Beijing; 44 (2): 143-163.





Fossil Rhinos – continued

- Fourvel, J.B.; Fosse, P.; Fernandez, P.; Antoine, P.O., 2015. Large mammals of Fouvent-Saint-Andoche (Haute-Saône, France): a glimpse into a Late Pleistocene hyena den. *Geodiversitas* 37: 237-266.
- Lucas, S.G.; Emry, R.J., 2001. Sharamynodon (Mammalia: Perissodactyla) from the Eocene of the Ily basin, Kazakstan and the antiquity of Asian amynodonts. *Proceedings of the Biological Society of Washington* 114: 517-525.
- Markova, A.K., 2000. The Mikulino (= Eemian) mammal faunas of the Russian Plain and Crimea. *Geologie en Mijnbouw* 79 (2-3): 293-301, 2 figs, 6 tab.
- Moullé, P.-E.; Lacombe, F.; Echassoux, A., 2006. Contribution of the large mammals of Vallonnet cave (Roquebrune-Cap-Martin, Alpes-Maritimes, France) to the knowledge of biochronological frame of the second half of the Lower Pleistocene in Europe. *L'Anthropologie*, Paris 110: 837-849.
- Musil, R., 2005. Jarošov-Podvršt'a – A faunal anomaly among Gravettian sites – Osteological material analysis (in Škrdla P., ed: *The Upper Palaeolithic on the middle course of the Morava river*). *DVS* 13: 203-216, 5 figs.
- Narváez Padilla, I.; Sarris, I., 2010. El uso de fósiles en la medicina tradicional – The use of fossils in traditional medicine. (in Moreno-Azanza M. & al., eds: Actas de “VIII Encuentro de Jóvenes Investigadores en Paleontología”). *Cidaris - Revista Ilicitana de Paleontología y Mineralogía*, 30: 211-216.
- Pushkina, D., 2006. Dynamics of the mammalian fauna in Southern Siberia during the Late Palaeolithic. *Vertebrata Palasiatica*, Beijing; 44 (3): 262-273, 5 figs.
- Pushkina, D., 2007. Eurasian Large Mammal Dynamics in Response to Changing Environments during the Late Neogene. Acad. dissertation to be presented, with the permission of the Faculty of Science of the Univ. of Helsinki, for public criticism in Auditorium Arppeanum, Snellmaninkatu 3, on Nov. 29th, 2007. PhD thesis No. 201, Public. of the Dpt of Geology D14, Univ. of Helsinki, Yliopistopaino, Helsinki: 29 pp., 2 figs + appendices.
- Sardella, R.; Palombo, M.R.; Petronio, C.; Bedetti, C.; Pavia, M., 2006. The early Middle Pleistocene large mammal faunas of Italy – An overview. *Quaternary International* 149: 104-109, 2 figs.
- Seehuber, U., 2008. Litho- und biostratigraphische Untersuchungen in der Oberen Süßwassermolasse in der Umgebung von Kirchheim in Schwaben - Inaugural-Dissertation zur Erlangung des Doktorgrades der Fakultät für Geowissenschaften der Ludwig-Maximilians-Universität München: 359 pp., 48 figs, 24 Pls.
- Shpansky, A.V., 2010. Dinamika fauny chetvertichnykh mlekupytayushchikh kak otrazhenie obshshego izmenenya fiziko-geograficheskikh uslovij v boreal'noy oblasti Evrazii [Dynamics of the Quaternary mammal fauna as an image of general changing of the physico-geographical conditions in the Eurasian boreal region]. Proc. of IV IPA Intern. Symp. “Evolution of Life on the Earth”, Tomsk November 10-12 2010, Evolution of Life on the Earth, TML-Press, Tomsk; 4: 656-660, 1 tab.
- Vekua, A.; Lordkipanidze, D., 2008. The history of vertebrate (sic) fauna in Eastern Georgia [w/ Georgian abstr]. *Bulletin of the Georgian National Academy of Sciences (Palaeobiology)*, Tbilisi; 2 (3): 149-155, 3 figs.
- Walker, A., 1968. The Lower Miocene fossil site of Bukwa, Sebei. *Uganda Journal*, 32 (2): 149-156, 4 figs.



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Dr Kees Rookmaaker is a member of the IUCN-SSC Asian Rhino Specialist Group, and advisor to the EAZA Rhino TAG and to the International Rhino Foundation. He is the editor of the rhino section of *Pachyderm*. Author of eight books on African and Asian exploration and on the rhinoceros, as well over two hundred shorter publications, many in peer-reviewed journals. He works as a Senior Research Fellow on [Darwin Online](#) and [Wallace Online](#) at the National University of Singapore. He is Secretary of the International Commission on Zoological Nomenclature (ICZN).