



RABID BYTES

The Newsletter of
The Alliance for Rabies Control

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Editorial

Welcome to the third edition of Rabid Bytes, with information about rabies in South Africa, Kenya, Nigeria, Pakistan, India, the Philippines and Thailand.

This month, we are pleased to tell you that World Rabies Day (WRD), planned for September 8, 2007 and every year thereafter, was officially supported by the World Animal Health Association (OIE). This was announced by Dr Bernard Vallet, the Director General of the OIE, at the OIE Rabies in Eurasia Conference in Paris, France. The WRD initiative is a milestone for all of us involved in the field of rabies, regardless of our own specific area of expertise.

WRD presents an opportunity for all of us to promote rabies awareness in our own institutions, villages, cities, countries and international organizations and to spread the word that no one need die of this dreadful disease as virtually every death can be prevented. Specific activities for WRD are being planned by many groups located

in countries on every continent. We invite you to be a part of this great initiative by whatever means possible. Our goal is to involve 55,000 people across the world in WRD events, one participant for every human death that need not have occurred during the previous year. We look forward to hearing from you regarding what activities are planned in your area so that we can share them with the rest of the world on our website:

www.worldrabiesday.org. Here you can also download the WRD logo to use in conjunction with your events, find information on global activities, educational material, and purchase T-shirts, mugs, badges and other products with the WRD logo to help spread the message. As stated so well by Asabe Dzikwi on page 3, 'together we can make rabies history!'



Deborah J Briggs, Executive Director, ARC

Rabies and the Animal Welfare Community

The management of stray dogs is a key element of any rabies control programme. This complex issue involves many different stakeholders, each with their own priorities. It is essential, therefore, that any control strategy takes account of the views of all the major stakeholders and is coordinated with agreed aims and objectives. The animal welfare community have a crucial role to play – whilst accepting control is necessary they feel it is imperative this is done using only humane methods.

The particular strategy chosen in any one location will reflect the nature of the "stray dog" problem in that area. Good quality population studies are important to evaluate this as well as to monitor success (or failure!).

In some countries, the free roaming population may include so-called community dogs. Whilst having no specific owners, many may be tolerated and indeed valued by the community at large. We should not undervalue the impact of the human-animal bond in such communities. Attempts to control these free living dog populations have included "trap/neuter/release" programmes in which dogs are randomly captured, surgically neutered, vaccinated against rabies and then released in the same place. Though successful in some instances, this is relatively expensive and logistically difficult. Community dogs that are cared for may have a higher reproductive success than truly feral ones, and so if resources are limited, these should be the target of neutering campaigns. To achieve this effectively would require education

programmes that promote community responsibility. This could clearly be tied into human public health issues, such as rabies control. The local community is another key stakeholder that must be actively involved if success is to be achieved.

ARC's philosophy to control rabies using mass dog vaccination programmes could be an important way to encourage more general community education. Making the dog population safer could promote community responsibility, after which neutering programmes might be easier to introduce. Removing the threat of rabies would certainly affect the way people deal with dogs on a day-to-day basis, and this would surely lead to improved welfare of the dogs – a bonus for the animal welfare stakeholders!

Further information about humane stray dog control strategies is available from the World Society for the Protection of Animals (WSPA):

www.wspa-international.org



Contributed by Ray Butcher, a veterinarian at the Wylie Veterinary Centre near London, UK, an advisor to WSPA, and ARC board member.

Teaching children safety around dogs

Animal Aid, a charitable organisation devoted to animal rights and based in Udaipur (Rajasthan, India), is running an education program designed to reduce dog bites and prevent rabies in children. Their approach is to teach children how to avoid aggravating dogs, recognise unfriendly behaviour in dogs, and how to avoid being bitten.



Photo: Madhu Sen

The education project is funded by The William and Charlotte Parks Foundation (USA) and is run by Madhu Sen, the charity's Education Officer, and a full-time volunteer, Claire Myers. The teaching is delivered in Hindi and Mewari, a local dialect, to school pupils in their classrooms. Several local women have also been trained to present the information using posters as aids. The project has only been running for a year, but already has addressed over 17,000 children between the ages of 10 and 18. "When people don't know what signs they should be looking for in dogs in order to understand whether or not they're dangerous, maybe this scares them" says Claire Myers.

Animal Aid also runs a dog sterilisation and rabies inoculation program that has been supported by donations of rabies vaccine from the Dutch Pharmaceutical company Intervet. Since 2003, it has treated over 10,000 dogs in the city.

More information about the charity is available at:
www.animalaidsociety.org

Rabies in the Kruger National Park, South Africa .

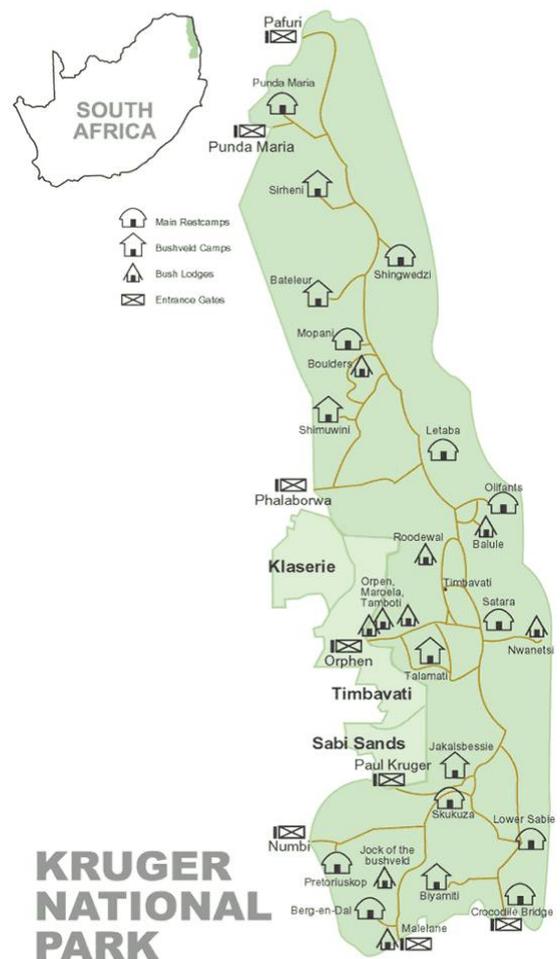
While rabies is endemic in many provinces in South Africa, it has never become established in wildlife in the Kruger National Park (KNP), the country's premier wildlife reserve and a major tourist destination.

The spill-over of canine rabies from the north-eastern part of Limpopo Province into the greater Kruger National Park was first detected in the latter half of 2005, when three rabies-positive stray dogs were shot, one near Shingwidzi camp, one near Shangoni gate and the other near Papanyane windmill, east of Vlakteplaas. In the period April to September 2006, three more rabies positive stray dogs were shot near Mahlangene ranger's post. In addition, four more stray dogs showing typical aimless wandering or aggressive behaviour were reported by staff or tourists, but could not be located. In October 2006, a tourist motoring just outside the park near Phalaborwa picked up and was bitten by a dachshund found wandering near a park entry gate. Two further victims were bitten before the dog died and rabies was confirmed post-mortem.

Finally, in November 2006, a sub-adult side-striped jackal at Ngala lodge in the Timbavati Private Nature Reserve (TPNR) was confirmed positive for rabies. Two humans were bitten by the animal. The TPNR is part of the greater KNP complex, and this is the first case of rabies ever confirmed in a wild animal in the greater KNP complex.

Prior to these recent rabies spill-over events, the last documented and confirmed cases of canine rabies in stray dogs in the KNP were as follows:

- 1996 – 1 dog at Safari – associated with a major outbreak in Mozambique (Pafuri / Chicualcuala area).
- 1987 – 1 dog at Nwanedzi.
- 1986 – 3 dogs at Nwanedzi, Satara and Skukuza.
- 1983 – 2 dogs at the eastern boundary. Associated with a large outbreak in Mozambique.
- 1982 – 4 dogs in the eastern boundary area. Associated with a large outbreak in Mozambique.



Reported by Dr Roy Bengis & Dr Dewald Keet (Chief State Veterinarians, Kruger National Park, South Africa), and Dr Lucille Blumberg (Head of Epidemiology Unit, National Institute for Communicable Diseases, Johannesburg, South Africa).

A Personal view from Asabe Dzikwi

I am a veterinarian, at the Department of Veterinary Public Health and Preventive Medicine, Ahmadu Bello University, Zaria, Nigeria and am currently working on a doctorate degree on rabies and undertaking laboratory work at the Rabies Laboratory of the Centers for Disease Control and Prevention (CDC), Atlanta, Georgia. I was motivated to work on rabies because it is a neglected disease with the bulk of 55,000 deaths occurring in Asia and Africa. Rabies research is challenging and African scientists are unwilling to venture into this area for the fear it elicits and also due to the lack of available diagnostic facilities.

Nigeria has a large dog population including a significant number of strays. Many owned dogs are not vaccinated due to the prohibitive cost. Dog bites are very common, post exposure prophylaxis (PEP) is expensive and not readily available, and accurate data of human deaths is lacking due to misdiagnoses and underreporting. If a small number of doses of PEP were made available through regular donations over time to medical centers in populated areas, many lives would be saved in my country.

World Rabies Day (WRD) offers us a great opportunity to create awareness and participate in curbing rabies in Nigeria. I thought of using mass media campaigns and public participation as effective tools for creating awareness. About 39 million people speak Hausa, a major Nigerian language, which is also spoken in some other African countries namely Benin Republic, Burkina Faso, Cameroon, Niger, Ghana, Sudan and Togo. My idea is to use the popular media to broadcast an educational programme in Hausa as a means to educate people on rabies. Therefore, I have contacted The Voice of America (VOA) and have arranged for a programme to that effect.

We have already translated the WRD logo into the Hausa language and now we are working on 2 other Nigerian languages namely Yoruba and Igbo. I also think that educational materials like posters in local languages to target school children will be very useful for creating awareness.



The Chief Veterinary Officer of my Country, Dr Junaidu A. Maina has welcomed me to work with the Deputy Director Veterinary Public Health and plans are on the way towards the WRD. I have also requested my institution, Ahmadu Bello University, Zaria in Nigeria to work with the veterinary staff and students to think of activities to mark that day. If dog vaccines, syringes and needles were donated, mass vaccination campaigns could become a reality.

I believe we all can work together and make rabies history.

Rabies in a Cheetah



Contributed by Sarah Cleaveland of Edinburgh University who researches rabies in East Africa and is an ARC board member. For further information see: <http://news.bbc.co.uk/1/hi/entertainment/6470825.stm>

A BBC wildlife documentary, "Toki's Tale" screened in the UK on April 4th 2007 showed dramatic footage of a rabid cheetah attack. BBC presenter Simon King and cameraman Stephen Nangunye were filming another cheetah, a hand-raised orphan male, called Toki, being released back into the wild in Kenya.

Just before Toki was due to be released, an adult female cheetah was seen in the vicinity of the pre-release enclosure. The female was extremely tame, but otherwise appeared completely healthy and normal. Unfortunately, the "tameness" was an early sign of rabies. Thinking she was a healthy, habituated cheetah, Simon and Stephen were astounded when she attacked, and as a result of the attack Stephen suffered bite injuries to his hand and Simon was injured by her dew-claw.

After the incident, the team realised that the cheetah might be rabid and washed their wounds thoroughly before rushing to the nearest clinic where post-exposure prophylaxis was administered. The cheetah's condition deteriorated rapidly and she was tranquillised and euthanased by vets. Tests done in Nairobi confirmed that she had rabies.

Rabies has rarely been documented in cheetahs, and this incident suggests that cheetahs may be one of a growing number of endangered species threatened by rabies. In East Africa, the rabies problem originates with domestic dogs, and results in hundreds of humans suffering and dying horrifically every year.

Simon and Stephen were fortunate in being able to access and afford the course of rabies vaccine needed to prevent the onset of clinical disease. But most people in rural Africa are not so lucky and the bite from a rabid animal can often be a death sentence.

From principle to practice in rabies control in Thailand

Early in 2006, a group of scientists from Bangkok introduced themselves to community members in a rural area of Thailand. The villagers were surprised to be visited by such a highly motivated group whose intentions were to save lives from rabies in their community. After the first meeting, the villagers had realised the potential danger of rabies not only to humans but also to their pets and dogs.

Over the following weeks, a series of meetings was held at community level, with educational material designed and distributed in villages. Several subsequent visits were made to raise understanding and awareness of rabies prevention and control. Special efforts were made to emphasize public participation and responsible dog ownership as key factors to effective rabies control and prevention. Message dissemination, in order to build trust, was carried out at several levels in the community, from door-knocking, small group discussions, community leader meetings and the promotion of primary health care volunteer participation to a fact finding mission on rabies epidemiology. These were designed to demonstrate how to achieve a successful campaign and to ensure that the participating community was sufficiently motivated.



A return visit was made by representatives from the World Health Organization, an animal welfare group and scientists, one year after launching of rabies control campaign. All community members stated

that they realised the danger of rabies and no longer expected deaths from this disease after the campaign. The community's motivation level had been successfully raised and transformed into real actions. Community dog owners had



become less dependent upon external help for rabies vaccination and sterilization, and almost all dogs in the community were registered. Villagers constantly monitored foreign dogs without tags or collars. These were caught, vaccinated and sterilized.

The lessons learnt have been summarized, modified and prepared for extensive application to other communities, with community participatory rabies control guides for larger populations already planned. The original, successful, community will act as message disseminators to these new localities, which will be entitled to receive technical support and active collaboration. It is believed that this systematic approach will be welcomed and embraced by the public, and further successes are anticipated.

More information on the project and rabies in Thailand is available at www.soonak.com

Contributed by Dr. Chirapol Sintunawa (Mahidol University, Thailand)

Mourinho cautioned over UK rabies regulations

The importance of having correct paperwork for importation of dogs into the UK was highlighted recently when Jose Mourinho, the manager of Chelsea Football Club (a team in the English Premiership), was arrested for obstructing police investigating the paperwork for his pet terrier. Pets can be imported into the UK from selected countries (including EU, USA, and Australia) without undergoing 6-months quarantine, but only if they have the necessary paperwork and identification (microchip) needed to show that they been vaccinated against rabies and have sufficient rabies antibody levels at least six months before importation. The regulations do require pet owners to be organised before undergoing any travel. But forethought and preparation is surely a price worth paying to prevent the devastating consequences of introducing rabies into dog and fox populations in the UK – for people, pets and wildlife. Sorry, Jose, the rules apply to everyone!

The full story is available at: http://uk.news.yahoo.com/rtrs/20070518/tuk-uk-britain-mourinho-fa6b408_1.html

Traditional rabies treatment condemned in the Philippines

An increase in the incidence of human rabies in the Philippines is being blamed, in part, on a traditional, but ineffective, healing practice called "tandok". In tandok, the healer incises the skin, places a water buffalo horn over the cut and applies suction to supposedly extract the rabies virus. It is not recommended because it is highly invasive and may result in tetanus, hepatitis or other infections, and its effectiveness against rabies is unproven.

The recommended treatment in the case of any animal bite is to wash the wound immediately with water and soap and seek appropriate medical attention as soon as possible. Practices such as tandok delay proper medical treatment, with many patients seeking treatment only when the symptoms of rabies have already set in. By this time it is too late for effective medical intervention. At least 5 people are thought to have died from rabies in the first months of 2007 as a result of receiving tandok.

Over the last decade, there has been a steady decline in the number of rabies cases in the country, but the Philippines currently ranks sixth among the highest incidence of rabies cases in the World. The Philippines Department of Health's National Rabies Prevention and Control Program reported that in 2006, 113,379 people were victims of animal bites (with over half being under 16 years old) and 270 people died of rabies. A national campaign aiming for a Rabies-Free Philippines by 2020, involving mass vaccination of dogs, was launched in late 2006.

The reports used to compile this piece are available at:
www.sunstar.com.ph/static/ilo/2007/02/06/news/human.rabies.cases.alarming.html
www.mb.com.ph/issues/2006/03/27/MTNN2006032759844.html#
www.bayanihan.org/html/article.php/20070309163715240
www.senate.gov.ph/press_release/2006/1124_cayetano1.asp

A Personal Campaign for Effective Rabies Treatment in Pakistan

Given Pakistan's myriad of disease problems, including tuberculosis, malaria, hepatitis, typhoid and water borne diseases, animal bites and rabies are a very low priority of the Health Department.

Neither medical school, nor Fellowship training in Infectious Disease prepared me for rabies prevention. No local scientific journal wrote about the disease, only newspapers reported outbreaks of "mad" dog bites. Traditionally, animal bite victims did not wash the wound, fearing that water might cause, rather than prevent, rabies. Instead, they applied salt, turmeric, oil, etc, covered it with a bandage, and took the victim to the civil hospital. At the two government hospitals victims received free Sheep brain vaccine (Semple) into the abdominal wall every day for 14 days. The Semple vaccine is still manufactured and distributed free by the National Institute for Health (NIH) in Islamabad. Often villagers have to travel hours, or even days to get to the hospital and usually do not complete the 14 day course. If and when symptoms of rabies eventually develop, the family consults a mystic in a shrine for his traditional treatment.

When I saw my first case of rabies in an 8 year old who had received a full course of Semple, I realized that this could have been prevented by proper wound care and immunization. Within the next three years I saw 12 more tragic cases in children and adults. I cannot forget the bizarre behaviour of the school teacher; the newly married villager who screamed in agony at every spasm, imploring me to save his life; the soon-to-be-widow with five children who would be left to beg on the streets; the child who

choked on his saliva, and between gasps begged my forgiveness.

I was shocked, bewildered, and saddened. I asked the NIH in Islamabad why they were still producing the ineffective and obsolete Semple vaccine against a

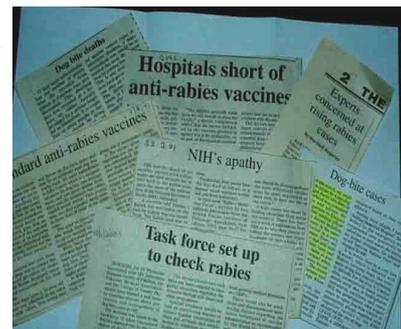
fatal disease. I phoned, wrote, and got the press to pursue the matter. Eventually in my capacity as President of the Infectious Disease Society of Pakistan (IDSP) I requested an appointment with the Director of NIH. I was told that tissue culture vaccines were too expensive for a poor nation. My campaign continued through press conferences, medical forums, the Ombudsman, Government ministers, radio, television, flyers, posters, walk for Rabies awareness, and seminars with the City Health Department. I have traveled with colleagues into medical schools, hospitals, clinics and to almost every city and town to stop Semple vaccine use, to teach proper rabies Post Exposure Prophylaxis (PEP) and to discuss dog population control.

In 2005 I helped prepare a docudrama for children and parents to understand dog bites, wound washing and ask for proper PEP. It is widely viewed in schools and community centers and thousands of copies have been given away.

Although quantifying the success of efforts to raise awareness is difficult, I do know that the demand from individual bite victims for Tissue Culture Vaccine (TCV) has grown, as has rejection of the Semple vaccine. Two large government hospitals in Karachi have not used Semple in over 10 years, and have recently been using intradermal TCV for the huge numbers of dog bites they receive daily.

The Rabies group has grown larger and stronger. Despite numerous other responsibilities, we are prepared to work harder to spread awareness into as many remote places as we possibly can. We will drive home this slogan on World Rabies Day as loud as we can: Nobody in Pakistan should die of Rabies.

Contributed by Dr. Naseem Salahuddin, Member of the WHO Expert panel for Rabies and President of the Rabies in Asia, Pakistan Chapter.



Photos: Naseem Salahuddin

Recent OIE meeting

The OIE/WHO "Toward the Elimination of Rabies in Eurasia" meeting was held at the OIE headquarters in Paris France on May 27 - 30, 2007. International participants spent three days listening to speakers from around the world discuss the latest developments in rabies research. One of the many recommendations resulting from the meeting was the initiation of a 3-year rotating rabies meeting conference schedule with the venue alternating between Africa, Europe and Asia.

Upcoming meetings

The 2007 Rabies in the Americas Conference (RITA) will be convened in Leon, Mexico east of Guadalajara in central Mexico from September 29th to October 5th. Details should be available soon at: www.rabies-in-the-americas.org/

If you have any news items or information of interest to those wanting to reduce the burden of suffering of rabies, then please contribute to this newsletter. The editor-in-chief of the ARC

newsletter is Louise Taylor who can be contacted via arc@rabiescontrol.org. For detailed information on the work of ARC, please see our website: www.rabiescontrol.org.