

# RABID BYTES

CARE Project, Philippines1-2
Yacht Race in aid of GARC2
World Rabies Day 20123
Bohol Project Selected as Case Study3
Walking the 'Smugglers Way' for WRD4
Eliminating Rabies at its Source 4-5
MEEREB Meeting5
Embark Tackles Rabies in Sri Lanka6
Madagascar Rabies Treatment Centre7
International Collaboration to Eliminate
Rabies in Latin America8
Upcoming Conferences8

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### **EDITORIAL**

Working toward the elimination of human rabies transmitted by dogs is something that everyone involved in the field of rabies is aspiring to achieve, no matter what our background and experience may be. We know that this worthy goal can be accomplished as we now have successful project reports coming in from several regional and local programs that have successfully reduced the number of human deaths by vaccinating the existing dog population. So what do these projects have in common?

Creating sustainable canine rabies control programs requires strategic planning that needs to include political support, carefully orchestrated operational activities, and access and usage of modern scientific methodology to enhance data collection and surveillance. Every rabies prevention and control program must support humane dog population management and governments are an essential partner to ensure that mass killing programs are not included as part of the strategy. Reputable animal welfare organizations are often willing to offer training and assistance for dog handling, spay and neutering and vaccination procedures. Although the primary goal is to increase rabies vaccination coverage to reach 70% of all of the dog population in order to eliminate the disease at the source of infection, it is also critical to be able to increase access to PEP for humans that have been exposed to suspect rabid dogs. Demand for PEP commonly increases in the dog rabies control program area as mass awareness and dissemination of disease control information increases.

Mass communication and awareness is also critical for improving community support for any rabies control program and for saving the lives of humans that have been exposed. Almost every human rabies death occurs because people don't know they need to seek medical treatment as soon as possible, because WHO recommendations (washing the wound, deviation from the PEP vaccination regimen, etc.) are not followed, or because of a delay in receiving PEP. It is also necessary to increase the capacity to respond to emergencies, for example in the case of a rabies outbreak, or if an infected dog is imported into a rabies free zone.

Regions that are launching canine rabies prevention and control programs must also be able to utilize scientific methods to evaluate data and improve surveillance. This includes the development and enforcement of data management systems that can evaluate the project as it progresses and afterwards. Dog population and ecological studies are necessary to determine the number of dogs living in a region and how many dogs must be vaccinated in order to reach the WHO recommended 70% level. Adequate diagnostic facilities are required for monitoring and improving surveillance. Program areas must be willing to support molecular epidemiological evaluation of the region in order to identify the origin of any new outbreaks.

Sustainability can only be achieved through community engagement at a local level and governmental support at a national level. Clearly, regional differences in the approach to rabies prevention and control are likely to occur and may even be required to ensure that specific regions are able to sustain the investment for the long term.

Deborah Briggs, Executive Director, GARC

### NEWS FROM GARC AND WRD

# **CARE Project launched in Ilocos Norte, Philippines**

The provincial government of Ilocos Norte, in partnership with GARC, organized the 1st Provincial Rabies Summit, with the theme "Communities working together for a Rabies-free Ilocos Norte". This was held on April 27, 2012 at the Plaza del Norte Hotel and Convention Center, Laoag City. The event was well-attended by more than two hundred stakeholders including municipal mayors, local legislators, agricultural officers, health officers, barangay captains and health workers.

During the event, the Communities Against Rabies Exposure (CARE) Project was launched. Provincial Governor Hon. Imee Marcos and GARC Asia Coordinator Dr. Mary Elizabeth Miranda led the ceremonial signing of the

Continued on page 2...

... Care Project continued from page 1.

Memorandum of Agreement (pictured), which signifies the three-year partnership between the provincial government and GARC to eliminate rabies in the province.

"We give thanks to the Global Alliance for this unique opportunity to detrude the situation in the province and hopefully... we will be able to substantially eradicate rabies here in the province," Hon. Gov. Imee R. Marcos said. Representatives from the province's league of mayors and barangay captains expressed statements of commitment. Hon. Jessie Galano, President of the Barangay Captains League said in his statement, "We are happy that this (CARE)



Provincial Governor, Hon Imee Marcos and GARC Asia Coordinator Dr Betsy Miranda officially sign the Memorandum of Agreement which signifies the GARC and local government partnership.

Project will benefit the barangays especially the families in our communities. We embrace this program."

The CARE Project aims to strengthen and support the current Provincial Rabies Program through activities on: prevention of dog bites and human rabies; elimination of rabies in dogs; establishment of surveillance and diagnostic systems; and community advocacy and education on rabies prevention into elementary schools.

The project launching was followed by a symposium with discussions on the current rabies situation and implications of rabies elimination. The event aims to engage the different stakeholders and to strengthen the Provincial Rabies Control Council (PRCC). It emphasized the need for collaboration between the different sectors in order to make the project successful especially in the community-level.

Contributed by Elaine Llarena, Head of Asia Community Education for GARC with additional text and photo from Ms. Rose Ann Pulido, UP Development Communication student-intern.

# Trevor Drew completes transatlantic yacht race for GARC

On June 25th, the intrepid Trevor Drew, Head of Virology at AHVLA Weybridge, completed the famous "TwoStar", one of the most challenging yacht races in the world, in aid of GARC.

Trevor is an experienced yachtsman and Club Captain of the Civil Service Offshore Racing Club and sailed the yacht 'Jangada Too', a J109 and one of the smallest boats in the race with his teammate Richard Palmer. In 2010, the same team completed a two-handed race around the British, also in Jangada Too, coming 5th.

The TWOStar is a 2,800 nautical mile course cross the Atlantic from Plymouth, England to Newport, Rhode Island. Sailing non-stop, with only 2 crew against the prevailing winds and currents, this is probably one of the toughest races across the Atlantic, with risks including icebergs, North Atlantic Right Whales and the fog banks of Newfoundland.

In the harder moments they dodged lightning storms, were



The teammates celebrate their achievement and help to counteract the weird feeling of being on dry land

surprised by a whale, dealt with becalmed seas, battled the effects of sleep deprivation causing them to hear strange sounds and had to make the decision to retire one of the sails that had been damaged. In the easier moments they enjoyed the bird watching, the dolphin escorts and some beautiful sunsets. Finally, on June 25th, after 22 days, 2 hours and 48 minutes at sea they arrived in Newport where they received a cannon salute and tied up in the midst of a thunderstorm. This time put Jangada Too in second place for their class, a fantastic result. The amazing hospitality and fine food of Rhode Island went down particularly well!

To recognise their success, an achievement that few make, Trevor and Richard were each presented with a Newport Yacht Club Burgee (flag) that they have been proudly flying on board the boat, and a City of Newport Sailing Medal. You can read more about the race on their blog at <a href="http://jangada-too.blogspot.co.uk/">http://jangada-too.blogspot.co.uk/</a> and you can support Trevor's effort with a donation to GARC at <a href="http://www.justgiving.com/Trevor-Drew0">http://www.justgiving.com/Trevor-Drew0</a>.

## **World Rabies Day 2012**



World Rabies Day is less than three months away and we are hoping that, in its sixth year, it will be more successful than ever, and spread the word about rabies prevention even further across the world.

Last year's campaign is summarized in the most recent <u>World Rabies Day Outcomes brochure</u>, and brought the number of countries ever holding a WRD event to 150, the total number of people educated about rabies to 182 million people and the

total number of vaccinated animals to 7.7 million! We invite you to join us in planning an event, and have lot of free resources available to help you on the WRD website.

A new <u>database of downloadable images</u> from WRD 2007-2011 can be used for any educational purposes and are perfect for media promotion. <u>World Rabies Day logos</u> are now available in over 40 different languages.

In collaboration with the Zach Jones Memorial Fund we have developed <u>new posters</u> (pictured) in english and spanish to help educate people about the risk of rabies from bats.

Our <u>bank of educational materials</u> continues to grow in both the breadth of resources and the number of languages available. It includes materials specifically designed for veterinarians, clinicians, humane organizations,





teachers, children, healthcare workers and pet owners. A special page of <u>resources</u> <u>for African countries</u> has also been recently developed. Please feel free to use the materials, to modify them and to contribute your own to help others.

Please <u>submit your WRD event details</u> through the World Rabies Day website to bring global visibility to your local efforts and to help others find an event in their community.

Additionally, the free <u>World Rabies Day Online Webinar</u>, will be held in two sessions on September 20th and 21st this year. The first will concentrate on presentations from Asia, the Middle East, Europe and Africa and the second will feature talks from North America, Latin America and the Caribbean Regions.

More than 200 people from 45 countries have already signed-up, so join us now by registering in advance.

Submitted by Peter Costa who manages the WRD campaign. You can contact him at Peter.Costa@worldrabiesday.org.

### **Bohol features in Case Studies for Global Health**

Our landmark project in Bohol has been selected as one of the Case Studies for Global Health.

Case Studies for Global Health is a partnership of philanthropic, academic, bio-technical, NGOs and not-for-profit organizations, which have joined together to showcase various approaches to global health concerns.

Naturally, every disease and situation has its own unique challenges and the case studies chosen focus on the full spectrum of global health problems. The aim of Case Studies for Global Health is to highlight innovative and/or collaborative solutions to these individual challenges to



- inspire and motivate others to find new ways to tackle global health problems
- raise awareness and broaden support for excellent projects
- identify and initiate debate about common barriers

# Walking the Smugglers Way for World Rabies Day 2012

In September 2012, a group of veterinary scientists from the Animal Health and Veterinary Laboratories Agency (AHVLA), UK, will be walking the Smugglers Way in Cornwall, UK, for this year's World Rabies Day challenge. In the past few years, the group have climbed Mount Snowdon, sailed around the Isle of White and cycled from Paris to London, and this year's event will be just as challenging.

On World Rabies Day 2012 (September 28th), the group will set out from Boscastle on the north Cornwall coast and embark on the Smugglers Way walk, crossing Bodmin Moor, and finishing in Looe on



Bodmin Moor, Cornwall, UK.
Photo courtesy of bodminlive.com

the south Cornwall coast. It will take 3 full days to complete this walk, with overnight camping stops. The Smugglers Way links two Cornish harbours that were renowned for their smuggling connections, and visits Jamaica Inn, the inspiration for Daphne du Maurier's novel of smugglers and wreckers. The terrain across the moor will be challenging,

both rocky and boggy, and includes the two peaks Rough Tor and Brown Willy. The moor is also linked to legend and folklore – King Arthur is reputed to have died on the shores of Dozmary Pool. Finally, on the 30th September, the group will reach Looe, where the challenge will end and the walkers can rest their weary legs!

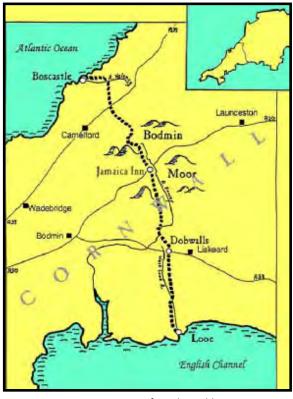
Submitted by Karen Mansfield of the AHVLA. If you would like to sponsor the group, please visit the fundraising webpage (<a href="www.justgiving.com/Walk-4-Rabies-2012">www.justgiving.com/Walk-4-Rabies-2012</a>).

All donations will go to the Global Alliance for Rabies Control.

# Eliminating Rabies at its Source in Asia and Africa



At the summit of Mount Snowdon in Wales, for World Rabies Day 2009



Route map – image courtesy of Frank Squibb

At the beginning of May, at the World Small Animal Congress in Birmingham (UK), Dr Tiziana Lembo of the University of Glasgow and GARC, presented evidence to support the vaccination of domestic dogs as the best way to prevent rabies worldwide.

Most people affected by rabies live in Asia and Africa and are already contending with extreme poverty. Whilst tackling the disease through post-exposure prophylaxsis is the common approach, this is expensive, supply is often erratic, and the victim still has to contend with the emotional and physical scars of an attack by a rabid animal.

Examination of the transmission path shows that domestic dogs are overwhelmingly the source of rabies in people, and even in other species. Vaccination of a big enough proportion of domestic dogs breaks the chain of transmission, eventually enabling disease elimination. That 'big enough' proportion is 70%, a figure based on the number of subsequent transmissions each infected dog causes, and the size and turnover of domestic dog population. The cost of vaccinating a dog is about \$2 per animal. Prevention by vaccination of 70% of a domestic dog population requires high initial investment but in the long term is much more cost-effective than the current strategy.

Research from around the world shows that most dogs, even those which are free-roaming, have owners and

Continued on page 5...

### ... Eliminating Rabies continued from page 1.

that those owners (irrespective of socio-economic status) are willing to walk considerable distances to have their animals vaccinated. For very remote communities, home visits have proved effective. Knowing how many dogs there are remains an operational constraint. Currently estimates are based on extrapolation of research but encouraging governments to include information about dogs on nationwide censuses of human populations would help.

Mobile phone technology is expanding in developing countries and making things easier. Improved communication helps with vaccine stock management, and reporting incidence of the disease and the impact of control measures.

Education and participation at the community level is crucial. The approaches used to engage local communities are well received and attendance at vaccination clinics is good. World Rabies Day (a GARC initiative), held annually since 2008, now has participation from 150 countries.

At the national level, some countries have encouraged engagement between veterinary and medical services. The administrative challenges of this can be difficult but efforts should focus on increasing capacity in these services for rabies surveillance and prevention, and integrating budgets across relevant ministries.

To date, global efforts to eliminate rabies have relied heavily on advocates like GARC and the Partners for Rabies Prevention. Their job has included assessing the global burden of rabies; raising awareness of the disease at all levels; identifying and addressing gaps in canine rabies prevention, control and elimination; helping endemic countries to design national programmes to tackle their own situation; and securing financial support.

Dr. Lembo concluded by saying that eliminating rabies at its source in Asia and Africa is an achievable goal and we should continue to work towards it. However, because rabies mostly affects poor, marginalised communities with little political voice, we still need to improve awareness and make sure that research findings are translated into policy.

Summarised by Liz Davidson of GARC from a report published in the Veterinary Record in April 2012 (Vol 170, issue 16). An extract of that piece can been read here.

### **News from the Community**

# MEEREB Members Call for a Regional Initiative for Rabies Elimination

The informal Middle East and Eastern Europe Rabies Expert Bureau (MEEREB) met in Paris on June 5-8, 2012. Representatives from Croatia, Georgia, Iran, Kazakhstan, Romania, Serbia, Turkey and Ukraine combined their expertise with scientists from the Pasteur Institute and GARC to discuss the rabies situation in their respective countries and identify strategies for regional control.



Some MEEREB countries, such as Croatia and Serbia, have not recorded human deaths from rabies for more than 30 years. However, the persistence of rabies in wildlife (foxes) requires constant surveillance and public health interventions in order to prevent human rabies cases. Oral vaccination campaigns for foxes that are being conducted in Croatia and Serbia with the support of the European Union could lead to fox rabies elimination in these countries in the near future, but reintroduction from neighbouring countries remains a threat. In the other MEEREB countries, rabies is present not only in wildlife but also in dogs, which increases the risk of transmission to humans. In fact, human cases still occur in these countries.

Success stories in Latin America, Western Europe, in some Asian countries, as well as in Croatia and Serbia prove that elimination of human rabies is achievable in the MEEREB region. It requires political willingness and cooperation of all stakeholders, including Ministries of Health and of Agriculture; adequate management of animal bites through PEP; pre-exposure prophylaxis for populations at high risk of rabies exposure, animal vaccination and humane control of stray dog populations.

MEEREB members call for a regional initiative for rabies elimination in Eastern Europe and the Middle East. They are confident that the elimination of human rabies of canine origin can be achieved in the region through a One Health approach, and that campaigns for rabies elimination will have significant benefits for public health, including strengthening the structure for control of other zoonoses.

Adapted from a press release from MEEREB following the Paris meeting. Information on MEEREB is available at www.meereb.info.

### Embark tackles rabies in communities in Sri Lanka

In March 2012, <u>Embark</u>, a community and animal welfare project based in Sri Lanka celebrated 5 years of commitment to providing a better life for street dogs in Sri Lanka. Embark is the creation of Otara Gunawardane, founder and CEO of ODEL, a fashion store.

The project gives primary attention to stray dogs and focuses on rabies management, minimizing the stray dog population (through the Catch, Neuter, Vaccinate and Release (CNVR) method recommended by the World Health Organization), reducing the abuse many stray dogs have to cope with and educating and creating awareness about animal welfare among the public. It provides free anti rabies vaccinations, sterilization surgeries, puppy re-homing campaigns, and cares for injured street animals and special needs dogs. Community education on responsible pet ownership, rabies eradication, dog bite prevention and animal welfare are administered by Embark to eradicate negative attitudes and misconceptions which prevail among the public about stray animals.

A main source of funding for Embark is through part of the proceeds from the sale of <u>clothing and accessories</u> <u>bearing the Embark label</u> at 15 ODEL stores in Sri Lanka.

Since the inception of Embark in 2007 the project has being involved in the lives of 20,000 homeless dogs. Celebrating the 5th anniversary Embark declared that it had conducted a total of 5,925 sterilisations and 9,351 vaccinations, treated 3,437 injured animals and found homes for 613 street dogs. Embark has also conducted 16 education and awareness programmes and five fund raising projects in its first five years.

Embark's main project on Humane Dog Population and Rabies Management was launched in 2011 in Maharagama, Sri Lanka. The project is a three year campaign which strives to eliminate rabies from Maharagama, one of the Colombo suburbs. This project is carried out in collaboration with a veterinary service provider, and



has had the support of government officials from public health and health departments since its commencement.



The aim of the project is to sterilise 80% of female dog population and to vaccinate 80% of the dog population in the Maharagama area within three years. Embark hopes to administer 35,000 + vaccinations and 5,000 + female dog sterilisations in the Maharagama suburban area by the end of the project. Since the inception of the project Embark has been able to facilitate vaccinations of 2,117 dogs and sterilisations of 271 female dogs. The campaign also educates primary and secondary school students on bite prevention, rabies and responsible pet ownership and to date has reached out to 483 students in the area.

The community of Maharagama cooperates with the project as they have understood the importance of

rabies management. They are appreciative as they are aware that Embark works with government officials. The community is not charged for the vaccinations and sterilisations of owned and street dogs.

The locations of the clinics are announced prior to the day of the clinic to inform the public. On the day of the clinic it is encouraging to see people streaming in with their dogs and some with street dogs from their areas to be vaccinated and sterilised. The educational programmes for the primary and secondary level students, conducted by experienced veterinary surgeons through interactive presentations, are being accepted well.

The community is appreciative since they understand it is not an ad- hoc programme but a long- term, sustainable programme which would reduce the street dog population and also create a safe environment.

ODEL's commitment to community animals through the Embark programme won international acclaim in 2011 at Animals Asia Welfare Awards 2011. ODEL was the only corporate entity to receive an award at this event.

Submitted by Upekha Daniel and Ashani Unamboowe of Embark. There is more information available on their website, <u>www.embark.lk</u>. You can see and order the clothing range that helps to funds their work <u>here</u>.

## **Rabies Treatment Centres in Madagascar**



On World Rabies Day 2011, a new rabies treatment centre was opened in Mandritsara, Madagascar, covering an area of over 10,500km2 and over 292,000 inhabitants, 945km from the capital. This area is seeing an increasing number of rabies exposures, and previously the nearest rabies treatment centre was 210km away. Representatives of the Ministry of Health and the Pasteur Institute in Madagascar are pictured (left) after the opening, along with the Centre's new director, his technicians and the Mandritsara Medical Inspector.

The Mandritsara Rabies Treatment Centre is situated within the public health centre in the main town, and is run by a general practitioner, with another doctor as second in command, and three paramedics. The centre is part of the Ministry of Public Health, but enjoys very close collaboration with the Pasteur Institute of Madagascar.

There are 27 rabies treatment centres in Madagascar, shared between the island's 22 regions. Before each centre is established, a management committee must be formed as part of the national strategy for epidemics in Madagascar. As rabies control is multisectoral, collaboration between all main sectors in the district is necessary and obligatory. The management committee includes professionals from medical, veterinary, educational, police and information services sectors and local political, religious and community leaders. Each entity has its own responsibilities, but there is always close collaboration when it comes to an epidemic or any problem connected with rabies.

Through its management committee (pictured), a centre handles all aspects of a rabies outbreak, including investigating bite reports, sampling and monitoring of biting animals, tracing and treatment of bite victims, reporting data to national authorities and news reporting to the local community. Emergency meetings are called to coordinate activities in the event of on outbreak. More routine activities include animal vaccination, dog population management, educational outreach to communities and through schools and general awareness raising amongst the community



about rabies. Sojabes, highly respected community elders play a vital role in raising awareness of the severity of rabies and intevening in cases where laws have been broken.



Ongoing training also takes part in the rabies centres. In November 2011, health workers in the Mankara District in the south-east, about 745km from the capital, had identified gaps in their knowledge about the correct procedures following rabies exposures, so refresher sessions were organised to upgrade their training, (see photo, left)

The Mandritsara rabies treatment centre has treated 217 rabies exposures (all from dog bites) in its first eight and a half months of operation, on average one per day. All patients are activity followed up to ensure that the vaccine course is completed. The

costs of vaccine and syringes are met by the Pasteur Institute of Madagascar, and patients recieve care free of charge. The centre also carried out a local stray dog population management programme.

This report was submitted by Dr. Emilie Fara Ramahefalalao of the Institut Pasteur in Madagascar, and edited by Jane Coutts of GARC.

### International Collaboration for Canine Rabies Elimination in Latin America

The control of canine rabies across Latin America is the largest-scale recent success story in rabies control, and international agreements have been key to its success. Since a regional initiative was launched in 1983 to eliminate canine rabies, the average number of cases of human and dog rabies in the region has undergone a reduction of over 95%. Human deaths due to canine rabies have fallen from almost 300 per year in the 1980s to 16, 13, 6, and 24 (13 in an outbreak in Haiti), in the years 2008 to 2011. This is based on a strategy of mass dog vaccination, timely provision of post exposure prophylaxis, education and surveillance.

A resolution signed in all PAHO countries in October 2009 set a goal for elimination from the region by 2015. Regular international meetings of both medical and veterinary ministries, and meetings of all the rabies program country directors have been vital in keeping the program moving towards elimination. Chile, Uruguay, some areas of Peru and Mexico have already declared themselves rabies-free, Costa Rica and Nicaragua are in the process and 5 other countries are programmed for this self-declaration. PAHO is helping countries to apply for official WHOsanctioned canine rabies free status (satisfying the criteria of 2 years without a rabies case). As canine rabies deaths decline, maintaining vigilance is both more critical and more difficult, so many former rabies control centers have been converted into zoonoses control centers to widen their remit and avoid capacity being lost altogether where canine rabies is no longer perceived as a problem.

The PAHO model stands as an excellent example of international co-operation and assistance, with all governments committing to the joint agreements and more developed countries assisting the resource-poor countries. For example, Brazil has donated 20,000 doses of rabies vaccine and 1,000 vials of RIG to Haiti, and has technical cooperation agreements with several other countries. In July 2011, a canine vaccination campaign on the Peru/Bolivian border was carried out by teams from both countries (see picture) and another cross-border campaign is planned for Honduras/El Salvador border areas.

As the number of cases fall, the reduction to cases to zero becomes the challenge. The majority of cases now are in Bolivia and Haiti, and 16 hotspots of canine rabies National authorites from Bolivia and Peru at a vaccination campaign along transmission have been identified so that efforts can be



their shared border. Photos by Dr Guillermo Gonzalvez (PAHO-Peru).

focused towards elimination from the continent. These hotspots are often in very remote areas with many challenges but the reporting of cases from these hotspots is being strengthened to provide accurate data.

It is clear that whilst canine rabies is declining, in countries such as Brazil, Ecuador and Peru, wildlife (primarily vampire bat) transmitted rabies is present. In 2004 and for the first time, more people died as a result of exposure to wild animals, especially bats, than to dogs in South America. PAHO recently recommended the incorporation of Pre-Exposure Prophylaxis against rabies into the Expanded Programme of Immunization for high risk Amazonian areas where the population is far from medical help, and this is now being carried out in some areas of Peru.

Contributed by the zoonosis team; Dr Marco Vigilato, Dr Ottorino Cosivi, Dr Alfonso Clavijo, Dr Hugo Tamayo and Dra Zaida Yadón at PANATFTOSA (the Pan American Center for Foot and Mouth Disease), the Pan American Health Organization.

# **Upcoming Conferences**

1st International Conference on Dog Population Management 2012 will be held in September 4-8, 2012 in York, UK. Further details are at www.dogpopulationmanagement2012.co.uk

The 2012 Rabies In The Americas (RITA XXIII) meeting will be held in São Paulo, Brazil, October 14-19, 2012. The website is at www.ritaxxiii.org



The editor of the Alliance newsletter is Louise Taylor and typesetting is by Pete Else. If you have news items or information about rabies, please contact her at louise.taylor@rabiescontrol.net. For further information on the Alliance's work see www.rabiescontrol.net.