Letter from the Chairman of the Steering Committee

Lambing is now over and I have returned to the Human Race to find my committee has been working hard with great success. The sad ongoing situation in Antigua shows clearly the differences between handling animals for profit or for greed. Buying and selling for profit makes sense. Our members who are bringing in animals are supplying us with a fresh gene pool which is good and if they make a profit good luck to them. What happened in Antigua was motivated by pure greed; a typical case of individuals trying to get round quarantine laws to make a lot of money with the tragic result of which we are all aware - dying animals. But don't let us be smug - it could happen here.

Congratulations to the members who are running these "do's"; it is up to us to support them; they sound fun. Do come along with your animals. We shall be "manning" a stand at the Royal Show and look forward to meeting both members and non-members for a chat about our animals.

Now a nag - have you registered your animals yet? It is very important that we know how many animals there are in the country, who is prepared to clip them together with other relevant information so that we can prepare some figures for the future - please help us.

Peter Knowles-Brown
ASSOCIATION NEWS

With great enthusiasm the New Committee met at the beginning of April.

Subjects discussed at the A.G.M. were once again debated to see how we could develop all the ideas put forward. Other members who have offered to help are being drafted on to Committees where we feel their expertise can be best put to use.

Camelid Diary

To enable members to look and book ahead for Camelid happenings, we will be running a Diary of future events, social and otherwise, in the Chronicle. Members wishing to attend these happenings will have to apply for details to Rachael Jaye, who has very kindly offered to look after the bookings and arrangement of future venues. So please, if you have a suggestion to offer for a "llama day", be it practical, theoretical or just plain social, give Rachael a ring, in the evening, or drop her a line. Her address is:-

Church Farm,
Eversholt,
Milton Keynes,
MK17 9DU
0525 28225

Royal Show

The Royal Show will soon be upon us and once again, can I make a plea for spinners to do a half day's stint at the Stand. If you can please let me know soon, as I have to organise complimentary entry tickets. Garments for demonstration or sale will be gratefully received and great care will be taken of them.

We are hoping that a representative from the Fibre Co-operative will join us on the Stand to put forward ideas of which way the fibre "is heading" and what they are doing.

Please Members do visit us, you might even get lucky if our Chairman, in between keeping the llama pens clear, can manage to keep the "pot hot" so a cuppa will be available for you!

I shall be at the East of England Show at Peterborough with camels and would be delighted if anyone can join me on the Stand for even a short time; spinners again will be most welcome.

FORTHCOMING EVENTS

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<td>June 8,9,10</td>
<td>South of England Show, Ardingly. Jenny Cobb &amp; Pam Walker</td>
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<td>June 10</td>
<td>Llama-Khana Day, Bideford, Essex. at the home of Peter Isaac</td>
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<td>June 24</td>
<td>Llama Sale, Pat Bentley's Auction at Penrith Market, commencing 12.30</td>
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<td>July 3-6</td>
<td>Royal Show, Stoneleigh. Committee &amp; Members</td>
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<td>July 16</td>
<td>A 'Day with Llama Friends' at Ordell Safran's home.</td>
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<tr>
<td>August 2</td>
<td>Llama - Deer Day at Maplehurst Farm</td>
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<tr>
<td>August(end)</td>
<td>Linda Johnson's (to be arranged)</td>
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<tr>
<td>Sept. 23-24</td>
<td>Pat Bentley's Llama Weekend, Penrith.</td>
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<tr>
<td>October 11</td>
<td>Llama auction, Stoneleigh. Animals welcome from all members. Molly Badham, Twycross Zoo. To be arranged.</td>
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After Peter's 'Llama-Khana Day' you will see Pat Bentley is having her Auction at Penrith. She has very kindly offered us a stand to enable non-members and/or new owners to join the Association. Thank you Pat, we hope the day goes well for you. (If any members wish to see the llamas and alpacas being offered for sale, Pat has extended an open invitation to visitors, she currently has over 57 animals on her farm but please, do phone her beforehand. Her Tel.No. is 093 14 373)

Ordell Safran is working hard to make her 'Day With Llama Friends' a great success, so I hope as many as possible will attend, with their animals.

'Llama-Deer Day' at Maplehurst is a week day, thereby enabling people who cannot manage to come at weekends to attend. Details will be with Rachael Jaye in the next couple of weeks.

The dates for the remainder of the functions have not yet been fixed, so look out in the next issue for what is in store for your diary.

Pam Walker

We welcome the following new members to the Association:-

Rev.M. Balchin, Machynlleth, Powys
Mrs.E. Beadle, Huntly, Aberdeen
Mr. B. Carter, New South Wales, Aust.
Mrs.M. Crawford, Nairn, Scotland
Mr. P. Davies, Hereford
Mr. S. Dill, West Germany
Mrs.M. Eaton, Aylesbury

Mr. M. Garbett, Rye, Sussex
Ms. C. Giudicelli, France
Ms. R. Hall, Oxford
Mr. & Mrs. M. Wakem, Cockermouth, Cumb.
Mr. R. Wellington, Cwmbran Comm. Farm
Mr. & Mrs. W. Winters, Hassocks, Sussex
LETTERS

Letter from America

The llama boom in the United States is continuing unabated. During the last week in April the 7th. Annual Hartman Llama show and sale was held in Tecumseh, Nebraska. Three days of hoopla, shows, and auctions have made this one of the major events on the American llama owner's calendar. It now attracts the top animals in the country and the most serious owners and breeders, including certainly the wealthiest. The futurity sale attracted 58 female and 48 male animals all born in 1988. They brought an average of $29,500, with the top male going for $62,000 and the top female for $49,000. The following day the sale of adult llamas produced a top price of $150,000, for a male named 'Top Gun'. The 'top' female went for $60,000.

Fred Hartman told me that he felt this was by far the best collection of animals that have ever been assembled and that the number of people attending, as well as the general level of interest, well exceeded any previous year.

The International Llama Association will be holding its annual meeting in Salt Lake City, June 14th-17th. The organisers are not only looking forward to the largest attendance yet, but are pleased that a delegation from Britain will be present. Based on my own experience of last year's meeting I can strongly recommend this event to anyone contemplating attendance. It is a chance to meet and talk with a wide range of llama owners, some of whom have been in the business for many years and have a great deal of experience to share. Also the formal sessions are highly informative, with excellent speakers, and are geared both for beginners and the more experienced owner.

The recent deaths of a number of animals stranded on the island of Barbuda off Antigua has been a matter of serious concern. Last year the importer responsible for this tragedy was soliciting advance orders for animals from owners all over America. The publication 'Llama Life', as well as word of mouth, warned that it was highly improbable any of these animals would ever get into the United States. Yet many people invested their money. The deaths, which have been widely reported here, have led to a call for the International Llama Association to tighten up the importation regulations by the Department of Agriculture and a clear statement that animals from South America, only be allowed to be admitted through the single high security quarantine facility in Key West, Florida.

On the positive side the amount of good publicity which llamas have received in recent months has continued to increase and interest in llamas grows almost daily. The future looks bright here.

Peter Bourne

Dear Editor,

I enjoyed reading the article on 'Llamas, Alpacas and Guanacos' reprinted from the January 'Farm Development Review' in the March 1989 issue of Camelids Chronicle. However, two unfortunate errors spoiled an otherwise excellent report, and I write on behalf of the joint Rowett Research Institute/Macaulay Land Use Research Institute Camelid Research Programme to put the record straight. Firstly, we do not yet have any vicunas and, secondly, we are NOT inter-breeding the camelid species. The major fibre processors are only interested in purebred fibres: cross-breeding is considered undesirable at present. We are studying camelid breeding in detail and aim to identify techniques for improving the reproductive rate, particularly of the more valuable alpacas, guanacos and, in time, perhaps also vicunas....

Dr. Clare L. Adam

Obnoxious Llamas?

I was recently reading Elizabeth Arthursson's book 'Ewes And I', (she whose husband divorced her for "rearing lambs in the matrimonial dining-room"), when I came across the following paragraph describing her visit to Milton Zoo:-

"There seemed to be a dearth of camels, but we found the llamas. The thought of all that lovely alpaca to spin was exciting, but close up the llamas were really too large and hideous to go with sheep. When I mentioned them later to Bill (her vet) he said that the zoo was on his list of clients and that he trimmed the llamas' feet with difficulty. They were extremely ill tempered and could spit in one's eye at fifty paces".

This kind of publicity is really so misplaced. Does anyone know Milton Zoo? Is there something wrong with the poor llamas there? Or is this typical of the behaviour of animals kept in an unnatural environment, unused to handling and then subjected to the indignity of forcible restraint when veterinary attention is necessary. It may be impossible for some zoos to acclimatise their animals to frequent handling, but comments of this nature give people the wrong impression of camelids. Needless to say, I shall be writing to Elizabeth enclosing photos of our llamas, (far from hideous), and a recent copy of the Chronicle.

SORRY BERYL!

Hands up those who spotted the 'deliberate' mistake in the last Chronicle. Bill Cosens is actually Beryl Cosens renamed by my word-processor's Spell-check (couldn't have been my fault now could it!) It has proved indispensable on occasions though it does have a limited vocabulary and comes up with some thought-provoking alternatives, therefore I apologise in advance to all guanaco lovers for the day I accidentally allow the eager machine to edit their animals into guano!

Ed.
I wrote the previous article two years ago as part of my Memoirs; since then I have learnt a few more things about keeping guanacoes, not all of which agree with some of the other Camelid owners experiences and conclusions. I never dose mine in any way, (because I cannot catch them), and they move over three fields with an old Arab pony; occasionally we bring in five or six sheep to clean graze the fields. I had no idea that they could pass on diseases - so they didn't. Now that I know, they will probably all go down with fluke!

The male has learnt to respect the command of 'No' and a brandished bucket, but he is definitely king of the herd if the dogs come into the field, and has even faced up to a J.C.B.

**Rake off from Guanacoes**

They love changing fields, crossing the drive with a car blocking both exits and a bucket of nuts leading the way. The pony, who is almost greasier than the male guanaco named Echo, inspires so much rivalry that they "belt" across into the new pasture. Occasionally the young guanaco deviates and runs up the fence inside the field instead of crossing, in which case we all wait very quietly for calm to return. In due course the elders come back to collect him and they all make the crossing together. I find that Echo strongly resents losing even a tuft of hair, so after a few weeks of long distance combing with a rake, I have to leave him in peace for several months. The only time I sheared with scissors, my doped female, Gwen, leaving her a good inch of wool, she developed pneumonia in the first rain-storm and I had to sit in the shed with her and administer powdered penicillin for three days. This further enhanced our relationship, though she is still very protective of her young, and they, in turn are extremely shy and seldom eat out of the bucket before two years old. I think this extra shyness in childhood is all part of their self-protection gear, as is their fear of being encircled. I have two open doorways on their shed, so that nobody can get shut inside and hurt by another who is barring the exit.

I noticed that they have immensely long sight, and watch with keen attention some-one moving in a field a quarter to half a mile away. However, when we are all in the shed together they are not sure whether I am a bale of hay or a doorman and jump with surprise when they discover I am "me", this would tie in with being their only self preservation, by being able to spot danger a long way off and run very fast. I notice their necks, which feel like steel hammers, are very much a part of 'love-play' as well as part of battle tactics.

Living in Ulster where there is no competition for keeping guanacoes, I have reluctantly sold one male kid, to an experienced Deer Farmer. He has now got a small herd of male guanacoes, three of which he has sheared closely, having all the necessary crush equipment. He tells me they have become very vicious since shearing; this ties in with my firm belief that you cannot treat a wild animal like a tame one, I will be interested to hear if they survive a bad winter. Guanacoes seem to dislike heavy, sleetly, rain much more than frost or wind, but they must have shelter and they must have a mud patch to roll in if they are to insulate themselves.

We are probably the only guanaco breeders to have eaten a surplus male yearling, 80lbs in weight, he yielded small round joints of meat the colour and texture of Aberdeen Angus. The meat was very dense, with absolutely no fat and no strong flavour, due no doubt to feeding on grass, hay and pony nuts instead of mosses and herbs, which (like goats) they love, and probably need for medicines. They do nibble some moss and rushes, and adore cow parsley, tree leaves and bark. If they always have access to these they do not overeat on them, but are extremely selective.

**Treated the same way as Venison, which is also absolutely tasteless when farmed on grass, guanaco is a very good value meat; the fillet is tiny but delicious. Rather than sell them to doubtful homes I would advocate a short but luxurious and free life, rather than one of fear, leading to aggression and the same ultimate end. I have never found any vet to have the smallest success with a sick guanaco; warmth, water and comfort seem to be the best one can offer. I have had one failure and two successes with this treatment.**

**Family Planning**

Mating is a problem solved, to the very evident relief of Gwen, by removing the randy Echo three days before the baby is due. One can tell clearly then by the enlargement of the milking department, and they do produce eleven months to the day of mating. Successful mating has always been confirmed by the length of time they stayed coupled, and the fact that there are no further matings or any interest; as well as a great look of relief on Gwen's face! I judge the moment when she seems keen to have Echo back after birth, and the baby is strong enough to be on its own for a while. This is usually four to eight days from the birth. We had one very difficult birth, when I was caught napping, and found Echo trying to mate Gwen whilst she was giving birth. I beat him off, but she seemed unable to start ejecting again and was delighted, (and not at all fearful), when my son and I pulled the head and legs and got the whole baby out. It was an hour plus before the baby was able to get up. It is important to pull both the head and legs at the same time otherwise one damages the spine. It is also important to clean off the afterbirth if the mother fails to do so as it dries hard very quickly and hobbles or suffocates the baby.

I expect everybody knows far more than I do; my only previous experience was in keeping (and eating) hill-billy and Toggenberg goats for ten years when my children were small; also a lifetime of loving and caring for horses and dogs, and noticing how they behave to each other. We "achieved" a beautiful female baby this year and presume that, as Guanaco's Leader...
mates the whole herd, they are like peacocks and do not suffer from in-breeding?

We are now about to acquire two pairs of Axis Deer and another field of experience opens up before us. All we know is that they are small, spotted, rather square and plump with huge antlers, don't jump!!, mate independently and come from India. I will let you know about the jumping later.

We find a frightened guanaco can jump ten feet high and wide from a stand. I am tremendously grateful to the other members of our association for starting and producing a fund of information, and helping one to feel less out on a limb.

If anyone can think of a way of relatively easily bridging the Irish Sea I should be most grateful, for I would dearly like to be able to market and share this interest with others. I think we badly need a Collective in order to sell our wool, but at the moment I have none to sell as the 2½ kgs. which filled a sack, and is my total gain after five years is being most beautifully spun by Mrs. Cobb and hopefully will prevent me dying of hypothermia in my old age. I could find no interest whatever in selling the wool, except to another of your members; the request arrived too late and the financial rewards did not compare with the joy of having a fabulous warm, couture garment for oneself.

Has anyone any idea how long a guanaco goes on breeding? I think Gwen is beginning to look rather tired, she must be fifteen or sixteen years old.

Lady Kinahan
Co. Antrim

ASK LLAVINIA

I believe guanacoes can live until they are almost thirty in their natural habitat, providing they do not fall prey to pumas. In this country, where they have favourable conditions, good food, shelter, etc., their lifespan may even be lengthened. So providing Gwen is healthy and there have been no problems with the birth, or the baby, and she is willing there is no reason why she should not be mated again.

Members of the Committee are often asked questions of this nature so we have decided to start a problem page for camelids.

So if you, or your camelid, have any veterinary, behavioural, husbandry or personal problems, please send them to me before 14th. August. Names and addresses of owners will not be printed so please do not be afraid of sending unusual or embarrassing questions. I am sure other owners may have shared your problem and be able to offer either practical advice or at least, moral support!

Ed.

POISONOUS PLANTS

Having read the very interesting article written by Lady Kinahan in the March Chronicle, I noted that her female guanaco was poisoned by Rhododendron leaves. I therefore thought other members would be interested in the following list of trees and shrubs which are poisonous to camelids.

Deciduous Trees       Evergreens
China Berry           Andromeda
Pride of India/       Azalea
Bead Tree            Black Laurel
Chinese Tallow Tree   Castorbean
Kentucky Coffee Tree  Laurel
Umbrella Tree         Rhododendron
                        Tree Tobacco
                        Yew

Another llama health care tip for new owners is that when a llama reaches 2½-years-old discoloration of the bottom teeth is noticeable; as though they are decaying. This is perfectly normal and in the course of time new teeth emerge from the gums pushing out the old ones.

Maggie Warner

AZALEA POISONING IN A LLAMA:

The azalea, a member of the Rhododendron family, the leaves, twigs, pollen, and flowers of these plants (including andromeda and camomile) contain a toxin resinoid. Honey from such plants can be poisonous.

When ingested by mammals, the toxin causes drooling, lacrimation, nasal discharge, loss of energy, slow pulse, and decrease in blood pressure. Severely affected animals may exhibit emesis, incoordination, paralysis, and finally death. Survivors often suffer residual kidney and liver damage.

On March 23, 1980, an 8-month-old male llama was presented after eating azalea that morning. A few hours after eating the azalea, the animal began to drool. Then it began to vocalize as if in pain. The neck seemed painful. (In man, esophageal pain is characteristic of azalea poisoning.) The llama was brought in a van to our office. On arrival it looked anxious but otherwise normal. After the llama calmed down, however, the drooling, vocalizations, and apparent neck pain returned, accompanied by lethargy.

Treatment consisted of passage of a stomach tube, after which emesis occurred. A bloat preventive and a laxative were administered via the stomach tube. One millilitre of methyl atropine nitrate (5 mg/cc) was injected intramuscularly. (Atropine is indicated in treatment of rhododendron in man.) That evening the llama seemed free of discomfort. It appeared normal the next morning.

Robert M. Millar, DVM
CAMELIDS

Camelids are thought to have originated on the North American continent. At some time before the continental plates separated some of the species migrated east (to what we now know as The Old World) and became the Camelus dromedarius or Dromedary, and the Camelus bactrianus, or Bactrian Camel.

The other members of the species migrated south to the South American Continent and became The New World Camelids; flat-backed camels belonging to the Lama family. There are three members of this species, the Lama glama or llama, the Lama guanicoe or guanaco and the Lama pacos or alpaca.

The Vicugna vicugna or vicuna is a separate species of the family Camelidae and together with the guanaco is classed as a wild animal. It is on the endangered species list.

Camelid farming might sound exotic but the practicalities of keeping and breeding these animals are, perhaps surprisingly, much in keeping with conventional livestock husbandry apart from which, they also make excellent pets and many people own animals for this reason alone.

VICUNAS

The vicuna is the smallest member of the South American camelids. Still surviving as a wild animal it has almost reached extinction in its native homelands and is now a protected species. It resembles the guanaco but is smaller, more slender and has a longer neck. It stands 30 inches high and weighs around 100 lbs. The fleece is a golden fawn colour with a white patch on the throat.

Vicunas are animals of the Andes, being found on the high plateaux from 14,000 to 18,000 feet. They thrive at these heights, surviving on grasses and broad-leaved herbs, and only drinking every two days.

They live in small herds of eight to twelve females lead by a single male, the young male calves are expelled by their mothers when they reach ten months of age and live together in larger all male herds.

Gestation is 10 months, producing a single calf known as a "vicunita".

Vicuna fibre is the finest in the world. During the reign of the Inca Empire only royalty was permitted to wear vicuna robes.

These animals have never been successfully domesticated and there are very few in the U.K.

LLAMAS

The llama is the largest of the South American camelids; thoroughbred animals can weigh up to four hundred pounds and stand approximately four foot high at the shoulder. They are readily identifiable from other camelids by their distinctive 'banana-shaped' ears. Llamas are strong, intelligent animals with a gentle temperament and an inquisitive nature. Today there are no llamas in the wild, but the Peruvian Indians, who live on the "Antiguan", above 7,500 feet, still own large herds of animals. Apart from being their principal beast of burden the Indians weave their fibre into cloth for re-sale, make sandals from the hide, eat the lean dried meat, make candles from the tallow and even use the dried dung as fuel.

Llama animal husbandry is much the same as sheep farming as they receive the same vaccines against Clostridial infections, together with wormers, adjustment being made for difference in body weight. Supplementary winter feeding should be provided in the form of good quality hay and concentrates, Ready access to shelter and water must be provided.

Females are mature at about 18 months and males at about two years. It is advisable to remove males from the herd once they are over a year old as they will fight in the presence of females.

Llamas do not have a breeding season, mating induces ovulation to occur. It is therefore possible to time calving to coincide with the warmer weather in June, July and August. The gestation period is 11 months and a single calf is produced, twins being extremely rare.

The fleece varies in colour from black, through brown to grey and white, often having a combination of shades. Shearing is carried out annually or biannually. Yields vary but an average of 3-7 lbs. can be expected. Animals unused to frequent handling should be tranquilized for shearing to reduce stress both to llama and handler!

Llama fibre needs to be de-haired of the rough outer coat to produce a high quality yarn.
ALPACAS

In spite of its bulky appearance, the shaggy-coated alpaca is shorter and weighs considerably less than the llama. It is a shy, gentle animal and is more likely to suffer stress than its bigger relative. The alpaca no longer survives in the wild, having been domesticated since the third or fourth century B.C. Considered to be a gift from god by the Incas, the alpaca was kept in large, pure bred herds. Today, the alpaca still provides the bulk of wool for clothing the South American Indians. Alpacas live comfortably at altitudes exceeding 12,000 feet.

Alpacas can live outdoor throughout the year though they appreciate some shelter in their paddock. Winter supplementary feeding of ad lib hay is recommended, preferably supplied at ground level so as not to contaminate their coats with hay seed together with sheep or goat concentrates. They should be wormed and vaccinated as sheep.

As with llamas maturing males should be removed from the main herd and kept in individual paddocks to reduce the risk of seriously damaging each other when fighting. The gestation period is eleven to twelve months and a single calf is produced, twins being deemed virtually impossible. The male is returned to the female 10 to 15 days after calving. Mating occurs with the female lying down and the male sitting on top of her and lasts between 5 and 50 minutes. Once successfully mated the female ovulates and fertilisation should result. Unfortunately alpacas do not breed as easily as llamas and 50% of embryos die within the first month.

Alpaca fleece is usually brown or black, but white and various other shades are found. White is often the most sought after colour and a mixture of this and another colour is common. They are sheared annually and highly-strung animals should be sedated. Having no natural grease in their coat the shears can become burning hot so air-cooled clippers are desirable. The amount of fibre produced depends on the age of the animal, its general condition, or if it is suckling young, a general guide would be between 5-11 lbs. per head. Alpaca fibre does not need to be de-haired and is of superior quality to that of the guanaco or llama.

GUANACOES

The guanaco is larger than the alpaca but smaller than the llama. It is still found in the wild today, along the west coast of South America, being more common in semi-desert and at high altitudes but avoiding rocky country and forests. Herds of four to ten females are led by a single male, younger males uniting into herds of up to fifty individuals.

Guanacos are not domesticated and require sympathetic handling. Being wild animals, would be owners require a permit from their local council. Prices charged and condition stipulated, vary considerable from county to county, some areas charge nothing whilst others are quite expensive and may insist on various improvements being made to animal housing etc.

Guanacos are strong and have a tendency to jump when stressed; larger herds are probably best raised like deer. They love to run and need plenty of space in which to do so.

Kept in grass paddocks, they should have access to field shelter and fresh water. Barbed wire fencing is not advisable. Winter grazing should be supplemented with the feeding of concentrates and ad lib hay.

Female guanacos mature at about two years and males at about three years. During mating the male courts the female by circling, neck-pressing, snapping and grunting. The gestation period is around 11 months and a single calf is produced. Young males over a year old should be segregated from the females to avoid fighting.

The overall colour of the fleece is pale brown with a darker face and white underparts. Sedation prior to clipping minimises stress. Dependant upon the animal's condition, the sheared fleece weighs between 3-5lbs. The fibre is of two types, the rough outer coat containing the guard hairs beneath which lies an extremely soft, silky undercoat. Once de-haired the resultant spun-wool is of luxury quality, second only in value to vicuna fibre.

Mandi Hook
TIME RUNNING OUT FOR STRANDED LLAMAS

Members will have been distressed to read recent reports of the plight of a herd of llamas and alpacas, currently stranded on a strip of coral off the East coast of Antigua in the Caribbean. 268 animals were initially purchased in Chile last March for £16 each, as part of a 'get-rich-quick scheme' masterminded by two American businessmen. They were loaded improperly onto a plane and several pallets collapsed on top of them. 38 animals were discovered to have been crushed to death on arrival at Antigua but their horrific plight did not end there, as they were refused entry into the quarantine station on the neighbouring island of Barbuda.

The original plan had been to keep the llamas in quarantine for the necessary period stipulated by the U.S.A. Department of Agriculture and then to ship them to Florida for re-sale, at between £3,000 to £16,000 each. This would be considerably cheaper than quarantining the animals in America. However, the Barbudan authorities refused to allow them to land after months of dispute with the Americans over their proposals.

The animals were then shipped to the only place available, a barren, uninhabitated coral strip measuring 1,000 yards by 200 yards with little shelter and no fresh water. In temperatures of over 100 degrees Fahrenheit the woolly coated llamas and alpacas, born and raised above the tree-line at 14,000 feet, have been dying daily from heat and thirst. Several animals were sheared in an attempt to alleviate their heat-stress but these were amongst the first to die. Already 90 animals have died, including 19 nursing mothers and their calves.

Members of British Camelids have been in contact with the R.S.P.C.A. and British Government in an effort to have the animals removed from the Island, but time is running out for the llamas as temperatures continue to soar and no other country has yet stepped in to give them sanctuary.

British Camelids Secretary, Mrs. Pam Walker received the following letter from the 'World Society for the Protection of Animals':

"This is to advise you of action taken by our organisation regarding the improper transport and importation procedures of a herd of llamas and alpacas destined for sale in the U.S.A.

WSPA Field Representative, Michael O'Sullivan was dispatched to Antigua of April 25th. to ensure that proper care was being provided for the animals. He has reported that the condition of the animals has now stabilised and food, water and shelter are adequate. All the animals have been checked by a veterinarian; medicines have been dispensed where necessary. There is now 24-hour supervision of the animals by appropriate personnel."

In an effort to find permanent quarters for the remaining animals, WSPA offices have been in contact with the governments of Chile, Antigua, Barbuda, Canada and the United States. To date, no final arrangements have been made. WSPA personnel will continue the open communication with all parties involved until a satisfactory agreement can be made to guarantee the best possible situation for the animals.

However, in a report issued on May 15th, Mr. O'Sullivan is quoted as saying the animals in Antigua have just three weeks to live unless they are removed from the Island. Temperatures are expected to rise by at least 10 degrees during this period. He added that the animal protection agency was considering legal action against the herd owners.

"I hold both the Antiguan government and the investors to blame for all this. It's one of the grossest examples of unnecessary suffering", he said.

Animal rights campaigner Virginia McKenna has called for an end to the worldwide trade in animals.

"It's absolutely outrageous that these llamas can be exploited for commercial gain without any regulations to stop what is happening. They are carting animals around the world without taking any responsibility for what might happen to them...the group responsible for doing this should be prosecuted."

But as the media continues to publicise the llamas' horrific ordeal the wheels of power move painfully slow; it seems little progress is being made to save the remaining animals. The Association has done all it can to help, it is now in the hands of Officialdom to resolve this critical situation. I pray they are not too late.

Ed.

LAMOIDS FOR FIBRE PRODUCTION

There are four species of South American lamoids or camelids, all of which produce fibre of commercial value. The llama and the alpaca have been domesticated for many centuries, the former being used primarily as a pack animal but also kept for its meat and fibre, and the latter being kept mainly for its more valuable fibre as well as for meat. The guanaco is a wild species which has recently been kept in captivity and is relatively easily tamed. It and the vicuna, which has not been domesticated, produce exceptionally fine and valuable fibre. Although vicuna is the most highly priced of all camelid fibres, the annual production of about 150gms. per head is low. Because of that and the unavailability of this species in the UK at the present time, it is not considered further here.

Digestive system

Although camelids ruminate and have microbial digestive and biochemical processes similar to those found in the suborder 'Ruminata', there are important morphological and functional differences in the digestive systems of camelids and sheep or cattle.
The camelid forestomach has three distinct compartments. The first is by far the largest, occupying most of the left side of the abdomen. Food passes in both directions between the first and the smaller second compartment by a series of contractions. These compartments account for 10-15% of body weight, and their contents are drier than those of the reticulorumen of sheep or cattle, although the end products of digestion - mainly short-hair volatile fatty acids - are essentially the same. Food particles pass from the second compartment through a sphincter to the elongated tubiform third compartment from which solutes and water are rapidly absorbed. Camelids have a small hind stomach in which acid is secreted and further digestion occurs.

Camelids appear to have a more efficient nitrogen economy than sheep or cattle, being better able to recycle and conserve urea under conditions of low protein or nitrogen intake.

**Nutrition**

Like goats, camelids both graze and browse. Their natural habitat is the high (3-5,000m) tablelands and plains of South America where they feed on a variety of grasses, shrubs, mosses and lichens. Under UK conditions, they will graze a wide range of plant communities, given the opportunity, but thrive equally well on sown pasture. Until more specific information becomes available it is recommended that the nutritional guidelines developed for sheep and cattle be applied to camelids.

**Reproduction**

Camelids are induced ovulators, ovulation occurring 24-26 hours after copulation. Females do not have regular oestrous cycles and when not running continuously with males can have an oestrus of up to 36 days with short periods of about 48 hours when males are rejected. In their natural habitat in South America the breeding season lasts from December to March (equivalent to June to September in the northern hemisphere), but where the sexes are separated, both male and female alpacas show sexual activity throughout the year.

Ovarian activity begins at about ten months of age and the majority of females are sexually receptive at 12 months. The proportion of successful pregnancies is, however, dependent on body weight at mating and therefore related to management and nutrition.

Males may exhibit interest in females at 12 months of age, but in most cases the penis is adherent to the prepuce at that stage. They are not generally capable of mating until two or even three years old.

Mating takes place with the female in a sitting position and lasts for 5-50 minutes. The semen is deposited in the uterus. The position of camelids during mating makes semen collection difficult, necessitating the use of an artificial vagina in a dummy female. Electro-ejaculation can be used, but the semen is usually contaminated with urine and of variable quality.

Ovulation occurs from either ovary and occasionally from both. Multiple ovulations occur in 10-20% of cases although multiple births are extremely rare. Embryo mortality can be high as 50% and is reported to be a serious problem in alpacas. Almost all (greater than 97%) embryos are implanted in the left uterine horn, irrespective of which ovary carries the corpus luteum. No reason for this unique migration of embryos originating in the right uterine horn has been advanced. Another peculiarity of at least the alpaca is that almost all the young are born between the hours of 7.00 am. and 1.00 pm.

Gestation length is approximately 348 days in the llama, 343 days in the alpaca and 11 months in the guanaco. Matings frequently take place within four days of parturition, but females rarely conceive to services at this time. Fertile matings can be made 15-20 days after parturition.

**Disease**

There is little published information on the diseases and disorders of camelids, but it is known that they are susceptible to clostridial infections and to internal parasites. Until more detailed information becomes available it is recommended that vaccination and anthelmintic dosing programmes be based on those designed for sheep, with appropriate adjustments for differences in body weight.

**Management**

The management and handling of the camelid species considered here pose few problems. In general, normal stock fencing appears to be adequate, although handling yards for large numbers should be more akin to those used for deer than for sheep. Some form of field shelter is recommended.

The fibre is harvested by shearing. In the past this has often been carried out only in alternative years, but with the present interest in fibre production annual shearing is likely to become more common. In some cases it may be desirable to minimise stress at shearing by administering a tranquiliser; a combination of intravenously administered Xylazine and Ketamine (0.25mg/kg and 2.5mg/kg respectively) has been found to be effective.

**Conclusions**

At the present juncture it appears probable that the numbers of fibre producing goats and camelids in the UK will increase substantially for some time to come. The husbandry and management of these species is currently based to a large extent on analogies drawn from sheep and cattle production systems, but as numbers increase it is likely that important differences in the nutritional and reproductive physiologies and in the diseases and disorders of the various species will emerge.

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1988 BVA Congress, Lancaster.
FIRST ENCOUNTERS OF THE LLAMA KIND

When first I looked across St. Mary's Loch and saw the isolated farmhouse of Bowerhope on the far shore I knew we'd finally found our paradise on earth. Here we could raise sheep and pigs, our own lambs, our own free-range chickens, we might even find enough room for some children on its thirty acres of rough grazing.

When we finally moved, lock, stock and chicken shed, our companion-less goat suddenly developed severe symptoms of agoraphobia, roaming the wind swept hills in solitary confinement and gazing bleakly at the thistles and bracken with dismay. Hating to see her on her own we borrowed a flock of black-faced sheep but they were notorious escapologists and spent ninety percent of their time on the surrounding hills, demolishing the newly planted spruce afforestation. We were not too sorry to watch the devastation; who wants disease from their saliva.

"Did Henry VIII keep a herd at Hampton Court then?" I asked.

I told Derek and when he had finished laughing he said, "Can you imagine a llama farmer trying to explain, in vain, to his doctor, how he came to be in such an embarrassing condition."

However, I recalled reading, many years earlier, a delightful book by Ruth Ruck called 'Along Came A Llama' and from what I could remember of that story, I felt I should have little to fear and much to look forward to, from the experience of keeping the herd on our farm.

**Llama D-Day**

Still, I must confess to being a little apprehensive when the llama delivery date arrived and we heard the enormous horse-box trundling down the one and a half mile track to our farm. It had been raining steadily for almost a week and I really needed something exciting to buck up my spirits. The horse-box arrived, the back was lowered and I waited nervously for my first glimpse of these fearsome creatures.

Time passed, and nothing happened. It was something of an anti-climax from the expected emergence of charging llamas, foaming at the mouth and spitting profusely. Eventually, Peter, somewhat courageously I thought, disappeared into the trailer and lead out the most aristocratic creature I have ever seen. We were formally introduced- "This is Chan-Chan". Chan took one look at me in my grubby jeans and paint splashed wellies and visibly raised his noble brow.

"Do you really believe she is fit to look after Me?" he murmured in Peter's ear.

"Oh he's gorgeous", I said, pretending not to hear and reached forward to touch his long, fine neck. He flinched, flattened his ears and bared his lower teeth..

"Just try it!" his eyes warned haughtily.

Chan was lead into the paddock together with his first wife Demelza, two adult daughters Chimu and Cdzco and two young sons Machu and Pichu. They really were handsome animals, with long woolly leggings, their bodies entirely clothed in luxuriously thick cream fleece, even to the tip of their powder puff tails. Demelza was the exception, having a rich brown coat on her shoulders and body; her eyes were her most endearing feature, expertly outlined by a fine dark line and long curling lashes.

**So This is Scotland!**

The llamas stepped gingerly over the sodden turf, looking forlornly about them at the sea of mud and leaden skies above.

"Is this it?" They eyed me critically and I suddenly felt very inadequate and very small, (or in my case, smaller than usual).

"Don't worry, they'll soon settle in" Ann reassured us and as they drove away I felt sure I heard a united murmur of

"Don't leave us here, PLEASE! What have we done to
deserve this!" echoing around the empty hills and drifting out across the loch.

It was time for some straight talking so I elected myself Local Diplomatic Ambassador and leaning over the paddock fence delivered a brief lecture to the effect that I cannot suffer snobs and they might be pure bred nobility but it was no use peering down their muzzles at me as though I were an ill-bred urchin, even if I did look like one. "You can like it or lump it" I concluded but added "I still think you're beautiful" "Mmmhhhh" they chorused in agreement.

That evening the loch was bathed in golden twilight and when we went out to feed them they graciously accepted the goat's mixture, but kept an acceptable two feet away from us. The two calves nursed contentedly on their mothers and the sight of these exquisite, elegant creatures gently nibbling their food and surveying their surroundings with a slightly more appreciative air, was a picture of idyllic tranquility; you could almost hear the Pan pipes playing in the background.

The following day we introduced the llamas to Emma our goat, but after a cursory inspection, (llamas are incredible inquisitive,) they dismissed her. I couldn't blame them, they were far superior beasts. Emma's baleful gaze and look of total dejection finally decided us to buy another goat as cross-species intermixing was definitely not on the llamas' agenda.

Llama Llearning
I developed a tremendous thirst for knowledge on the subject of camelids but it proved very difficult to quench. Our librarian eventually furnished me with two school textbooks on Incas and I soon considered myself fully qualified to perform the Rituals of the Sun God but little else relating to llamas, except that I could provide anyone interested in a crash course on reading entrails. Eventually I got hold of a handbook from the Universities Federation for Animal Welfare and gratefully absorbed my new found knowledge. One point mentioned seemed debatable and that was the advice that housing was unnecessary apart from in zoos. Knowing that there is little natural oil in the fleece of llamas we were concerned about the effects of persistent rain, it seemed feasible that this advice might apply to the high Andes but not to the Southern Uplands of Scotland. (We have two kinds of weather here; 'raining' and 'rain imminent'.) So we provided the llamas with access to shelter in the form of an old bothy in the corner of their field, they were given straw for bedding and we put up hay racks. I often feel animals know what is best for them and the llamas usually slept in the shelter on damp evenings but seemed content enough to lie out in the rain during the day. Possibly their fleece is so thick that rain does not penetrate to skin depth. They seemed to relish the frosty mornings and on looking out after a particularly bitter night we could see their coats twinkling with frosted gems as they sat beside the dyke.

Eventually, I gathered a tremendous fund of veterinary information on camelids thanks to our vet who advised me to go to the Royal Dick (yes, honestly!) Veterinary College in Edinburgh. There I spent a happy day reading and copying reams of papers, surrounded by young, dedicated students who eyed me with a certain degree of contempt, as at the time I was eight months pregnant.

We were concerned that the llamas might escape, and being new to us and their surroundings we were afraid of losing them. Peter and Ann had told us that a single strand of twine strung loosely above the dyke would contain the herd. This seemed ridiculous! The field in which we had 'kept' the sheep had a four foot dyke topped with two strands of barbed wire and our sturdy little sheep had exhibited athletic ability of an Olympic standard in their habitual jaunts up the mountain. How a strand of string was going to contain four foot high llamas was beyond me. However, we drove iron stakes around the perimeter of their field and linked them with a single strand of ubiquitous baler twine. It worked! Although Chan occasionally ventured out into our newly planted orchard and gently pruned the young apple and pear trees he never lost sight of his harem who stayed contentedly within the confines of their field. In the weeks that followed our newly acquired companion goatling, on one of her habitual bids for freedom, ate the "orchard", tree stakes and all.

Llama Farmers!
During the following weeks the llamas grew to accept us as a necessary evil in their otherwise peaceful existence. Soon we were on speaking terms- "Mahhing" to each other, nose to nose across the fence or being permitted to stroke their down like fleeces in return for a treacle piece stolen from the goat food. Landrovers began to arrive bearing disbeliefing farmers, our neighbours, whom we had never met, nor probably ever would have, if they had not ventured down to see the llamas. One farmer, admiring their voluptuous fleeces, very kindly suggested we borrow his sheep-dip!

Time passed and we grew increasingly fond of our exotic visitors and increasingly short of treacle pieces. I was just considering telephoning the feed merchants to see if we could buy them by the bag when Peter and Ann telephoned to say they had found their own Shangrila, a 1000 acre sheep farm in the Lowther Hills and that they would be over to collect the llamas the following week. "They're coming for OUR Llamas" I cried to Derek and dashed out to tell my darlings the awful news.

The llamas wandered down to the dyke to meet me, eagerly craning their necks; ears forward and tails raised enquiringly, they explored my tattered pockets. "You forgot the treacle!" Chan snorted, but I was too full of self-pity to hear. "What ever shall I do without you?" I whispered.

But like all great love affairs this was not the end - only the beginning.

Mandi Hook
Our thanks to Gill Porter for the above cartoon. Gill is a veterinary student who stayed with Peter & Ann Knowles-Brown whilst studying Camelids. She obviously has happy memories of helping to dose the llamas!

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