

# LOSS OF VOICE IN BRUNUS EDWARDII

Henry Hodges

**Abstract** - Causes of the loss of voice in *Brunus edwardii* (vulg. Teddy Bear) are described. Since none of the conditions is responsive to medication, surgery is advocated and briefly described.

## 1 Introduction

In their pioneer paper on the diseases of *Brunus edwardii* Blackmore, Owen and Young (1) described very briefly loss of voice in some of the cases under study; but the brevity of their report did not allow them to consider this pathological condition in any detail. More recent writers have failed to follow this lead, although other illnesses of the species are dealt with in considerable detail (2,3). The purpose of this paper is to redress this imbalance by describing the condition more fully, and suggesting several remedies.

It is true that not all animals of the species *Brunus edwardii* are vocal, and that the mute variety is indeed common. Not infrequently it is preferred, if not by the owners, at least by their parents. Blackmore et al rightly refrained from subdividing the species on similar criteria, and in this case - the distinction between vocal and mute varieties - subdivision could be misleading since it is not uncommon for a vocal bear suddenly to become mute, in which case it could be easily wrongly classified.

It is also true that *Brunus edwardii* becomes vocal only as a response to external stimuli. Thus, if hit sharply on the chest, the bear will emit a plaintive squeak of protest. Cuddling with excessive zeal will elicit a similar response, although more gentle hugging may result in a long, drawn out note of appreciation.

## 2 Anatomy

In order to understand the pathological malfunctions of this creature a few words must be said about its unusual anatomy, specifically its lung, trachea and vocal cords. The single lung will normally be located ventrally in the lower thoracic or upper abdom-

inal region (Fig. 1), although it may have become considerably displaced. The lung normally comprises two hard squamiform plates connected by a cylindrical tube of flexible tissue. When the squamiform plates are brought into close proximity, as by external pressure, the cylinder will fold, to take on the form of a closed concertina. Within the lung will be found a helix of elastic tissue the function of which is to ensure that, when at rest, the two plates are kept apart. As far as can be ascertained the sole function of the lung is to provide a flow of air to activate the vocal cord, and it seems to have little to do with the normal respiratory process.

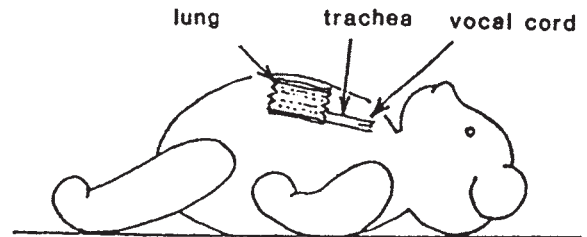


Figure 1 Lateral view showing the disposition of the organs under discussion.

The trachea is a simple tube, lacking any significant anatomical detail, emerging from the proximal end of the lung. It may be of variable length. The vocal cord takes the form of a thin, foil-like membrane inserted into the proximal end of the trachea. Normally there is only a single cord (Fig. 2).

One anatomical anomaly should be noted: in some cases the lung is less complex, taking the form of a single lobe of elastic tissue that, in a healthy specimen, will automatically inflate after being compressed (Fig. 2).

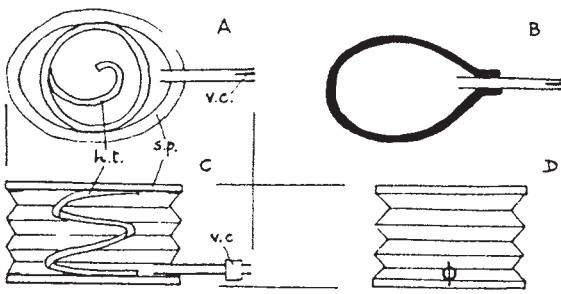


Figure 2 Lateral (A) and Ventral (C) sections of common type of lung and trachea, with the proximal aspect (D). Section of bulbar type of lung (B). h.t. Helical Tissue, v.c. Vocal Cord, s.p. Squamiform Plate.

### 3 Pathology

The most common causes of loss of voice in *Brunus edwardii* may now be considered. Rupture of the vocal cord, congestion of the trachea, rupture of the lung, fracture of the helix, and degeneration of the tissues (usually associated with old age) have all been encountered. Unfortunately the animal does not respond to medication, and surgery is essential. In fact without surgery it is generally impossible to determine which of these conditions has caused the loss of voice.

### 4 Surgery

First the animal should be carefully sounded to determine the exact position of the lung. Normally a small ventral incision is made sufficient to allow the lung to be removed. It will often be found embedded in the viscera which commonly takes the form of fibrous material similar, if not identical, to the fibres obtained from the seed capsule of *Ceiba casearia*. At this stage the trachea should be examined to ensure that it has not become congested with these fibres. They may be removed with forceps, care being taken not to damage the vocal cord. If the vocal cord has become ruptured it should be replaced. If at this stage gentle pressure on the lung fails to activate the vocal cord, it may be assumed that the condition is the result of lung damage. If the helix has become fractured or lost its elasticity, it will be necessary to open up the lung and replace it. More commonly, however, it will be found that

either the cylinder of flexible tissue has been perforated or has become detached from the squamiform plates. Reattachment is easily achieved by the use of a suitable adhesive; and while the cylinder may be patched over the perforation, it is often advisable to replace it entirely, especially if it demonstrates clear signs of degeneration. It is to be noted that some spare-part surgery is to be anticipated when dealing with this condition, but the wholesale replacement of lungs, trachea and vocal cord, as advocated by Blackmore, Owen and Young is somewhat drastic and in no way necessary. However, lungs comprised of a single lobe of elastic tissue may be so far degenerated that a completely new lung should be supplied.

Careful sounding may fail to reveal the precise position of the lung, in which case it may be essential to remove a large quantity of the viscera in order to locate it. Although this is somewhat drastic it has a certain advantage in that it becomes possible to examine the viscera for infections, such as *Anthraxus scrophulariae* or *Tineola bisselliella*. Should these be found present, the viscera should all be removed and cremated; new viscera of the same quality being provided during surgery.

Finally, considerable care should be taken in making the suture after surgery. The bear should not be heavily scarred, nor should the stitches be allowed to become too evident, as such a condition could easily lead to rejection by the owner, in which case it would be preferable to leave the bear voiceless.

### 5 Conclusion

The above descriptions of anatomy, pathology and treatment are taken from a number of cases with which the author has been involved over the past few years. Variations may occur from time to time as the species is very diverse and contains many variants.

One last word of warning: if it is deemed necessary to replace the entire vocal system, care should be taken not to introduce one from another species. A case was brought to my attention in which this mistake was made. When activated the voice produced such inanities as "I love you, Mummy" and "I have a pretty dress". Both bear and owner were so confused as a result that each had to undergo lengthy psychiatric treatment.

## 6 References

1. Blackmore, D.K., Owen, D.G. and Young, C.M. "Some Observations on the Diseases of *Brunus edwardii*", in *Veterinary Record*, 90 (1972) 382-385.
2. Herridge, B., *Every Bear's Life Guide*, McLelland and Stewart, Toronto, 1983.
3. Palau, M. and D., *Our Teddies, Ourselves; a Guide to the Well Bear*, Little, Brown and Co., Boston, 1983.

HENRY HODGES Born July, 1920; due to retire in July, 1985. Between these dates the author unwittingly became an expert on sponge-tempered pottery and other such erudite subjects.

His hobbies include eating. Author's address: 271 College Street, Kingston, Ontario, Canada.

Résumé - On décrit les raisons pour la perte de voix d'un *Brunus edwardii* (ourson en peluche). Etant donné que cette condition ne peut être guérie par des médicaments, on suggère et décrit une intervention chirurgicale possible.

Auszug - Die Ursachen des Stimmverlustes eines *Brunus edwardii* (auch Teddy Bär) sind beschrieben. Da keine der medikamentösen Behandlungen erfolgreich ist, muss ein operativer Eingriff erfolgen, dessen Verlauf hier kurz beschrieben wird.