This paper is for a presentation about looking at 'known facts' and considering if they should really be 'known myths'.

When I started I was taught the known facts for bats:

- punctured palate – euthanise,
- tear from the edge of the wing – euthanise,
- large holes – euthanise,
- if they are in too long they lose muscle tone and can't be released,
- broken arm – euthanise,
- one thumb – euthanise,
- baby microbats can't be hand raised – euthanise.

None of these are true but many are still believed.

What is a myth? I mean an accepted fact which isn't true but which is not only believed but often actively taught.

Why do myths exist? Where do myths come from?

Rehabilitators get very little formal training, don't belong to professional networks and don't have much professional backup, that's why I started WAIF– I couldn't find any training in wildlife welfare, there were so few vets with interest and knowledge and the time to answer questions

I think this leads to two situations contributing to myths:

1 Someone treats something and the animal either gets better or it doesn't and the treatment is immediately credited or blamed but one outcome doesn't prove much and the outcome may not relate to the treatment anyway (please do autopsies).

2 Chinese whispers effect, e.g. not surprisingly I get asked to advise on flying-fox wing damage so I look at a bat from barbed-wire and say - there's little chance for it – the wing is badly torn at every bone, the mouth is badly damaged, the bat is very old and it has an infection in that bone:

- 1st whisper can't save it, what was wrong? – bat with tears near bones, mouth damaged and an infection,
- 2nd whisper can't save it, what was wrong? – wing torn, sore mouth and an infection somewhere
- 3rd whisper can't save it, what was wrong? – not sure had a torn wing but she fixes those so must be the infected mouth

↳ Myth – flying-foxes with mouth infections must be euthanised and/or Judy is telling everyone that you must euthanise with a mouth infection.

Why do myths persist?

Well for it not to persist, first some-one has to query it, then the facts have to be discovered and then everyone has to accept it and that means moving past the unpleasant and painful fact that you may have euthanised an animal in the past that did not need to be and it may have been an animal of whom you were very fond.

How do you assess a known fact? To determine that let's look at some actual cases of myth busting.

W.A.I.F. (Wildlife Assistance & Information Foundation Inc) has a weekly wildlife veterinary clinic. The Chief Veterinary Surgeon is Dr Derek Spielman. One clinic I took in a barbed-wire bat – nothing wrong with her other than a punctured palate. Of course, as most bat rehabilitators know – that is instant euthanasia.

Derek looked at me as if I'd suddenly gone nuts. It wasn't the first time I'd got that look and it wasn't the first time he had turned a 'known fact' into a 'known myth' either.

What Derek actually said is 'it's a wound, like any other wound – why shouldn't it heal?'. I didn't have an answer to that – and I'm doing my Master's in wound healing so a good question to ask me! I do know, from my personal knowledge, that the cleft palate syndrome in Queensland often results in small palate holes which don't heal over and make it difficult for the bat to feed. BUT there are 2 points here:

1. cleft palate is a birth defect not a wound so the repair processes aren't the same, and,
2. difficult does not equal impossible, some bats, which I know, are over 10 years old.

I took the bat home and the punctured palate healed – it took seven weeks.. The palate healed in less than half of that, most of the time was in stabilising the front teeth which were loose.

So looking at this myth – was the origin based on incorrectly applying one situation to another? Possibly and this is certainly a key myth developer. It is important to be careful in relating one situation to another. Situations which appear similar on the surface may be radically different when the underlying processes are understood.

Always Look at the Science of Each Situation

Cath E Chidna was brought into the clinic on Christmas Eve. She was nearly comatose, had several wounds, probable pneumonia and a fractured beak – probably from a dog bite. She was very easy to x-ray – she just lay there and didn't move. I was there as 'vet nurse' and one of the few things I 'knew' about echidnas is that compound fractures of the beak mean euthanasia. That of course meant another look from Derek and remarks about – it's a bone – why shouldn't it heal etc. Home went Cath E Chidna to be cosseted, given daily injections and complete healing, including the beak. In fact she dug her way to freedom, shifting a large sleeper with the weight of the aviary on it in the process – despite the release door, less than ½ metre away, having been opened for her.

So looking at this myth – where did it come from? Bones heal so it wasn't that. Unable to feed? Certainly there were some feeding difficulties at the beginning. Fortunately echidnas don't have to feed all that often. Although the fracture was compound the fractured ends were aligned and therefore didn't need pinning etc. Problems with strength afterwards? Well she

moved that heavy aviary!. No doubt there could be problems with more severe fractures (as with any bone) and the ability to feed would be crucial.

Just because some fractures in some situations can't or don't heal doesn't mean others can't. Applying a blanket rule which doesn't review the specifics of the actual injury can lead to myths. As Derek said "applying a hard and fast rule of treatment or healing to all situations will often lead to miss-diagnosis".

Always review the details of current situation

Around midnight on Easter Thursday last year a young guy arrived on my doorstop with a little furless, eyes closed, mouth sealed scrap of a swamp wallaby. He weighed 125g. He was my first macropod and after pinky possums he seemed quite big. The first expert I managed to reach was Anne Williams the following week at the Bat conference. Among a lot of useful advise she gently suggested that I not name him for 2 weeks at least. Then I reached my Head Carer (why do emergencies always happen on public holidays?) and she suggested that worrying about a suitable run size could wait awhile. I understood their tactful hints – he wasn't expected to live and I subsequently discovered that 165g is considered the cut off point.

I didn't know and he didn't know and by the time I found out it was too late – Apari was determined to live. Do I advocate the raising of pinkies – as a matter of fact – no. I admire the dedication of those who do – it's a hell of a job – but I worry about the suffering of the very small. There has to be a point where you say no. Was Apari trouble free – no. Like many premature babies he developed gut problems. Back to Derek and one of his famous remarks. When I demanded to know (indignantly) how I was supposed to acquire fresh poo from healthy swamp wallabies much less access to their grazing grounds he laughed and replied 'I'm the vet and my job is to make a diagnoses – you're the rehabilitator and it is your job to implement them'. Sometimes having a vet who treats rehabilitators as competent intelligent professionals (as we all wish for) is a drawback (be careful what you wish for)!

Why did Apari survive despite the weight cut off? Where did the 'myth' come from? Is it a myth? Weight is a bugbear of mine! Too many flying-fox baby myths revolve around weight. First of all weight is easy to measure. Second we are culturally skewed to believing big is better. Thirdly in a growing animal its weight indicates maturity. It doesn't equal maturity. Maturity in this case is the ability to suck – which he possessed - in fact he was a guts. Don't let a rule of thumb become a rule of life. 'Rule of thumb; is thought to come from 17th century wood workers who used their thumb as a measure based on their experience rather than using a precise ruler. Now it means that something is an approximation not a precise law. NB: note it was their own thumb and they were experienced in the activity.

Always look for the underlying reasons and the whole picture and apply that to your case

Of course some rules of thumb are there for a reason! They are factual guidelines not myths.

So how do you tell the difference between myth and fact? This may not be easy but here are some 'rules of thumb' to help!

Ask the following:

Is there an answer to why and does it seem sensible in light of known similar situations?

e.g. echidna – well it's just a bone – why shouldn't it heal?

Do other 'well known' facts contradict it?

e.g. flying-fox membranes – well known to heal fast so why wouldn't the palate?

Do you know if the action has been tried and failed? And when was that?

i.e. consider Chinese whispers and whether or not techniques or knowledge have improved.

Answer the above considering:

- science of the situation (this one and similar ones),
- the details of the current situation (all of them),
- the underlying details of the rule of thumb.

Keep on questioning – what is right today may change tomorrow. Keep an open mind to learning and listen to, rather than blocking, new information – it may be right!