

Bat Detecting

How do we study something that only comes out at night?

DEVON
GREATER
HORSESHOE
BAT PROJECT



© John Kaczanow

Securing
a future
for Devon's
nocturnal
wonder



How do bats get around in the dark?

DEVON
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© Phil Richardson



How can we record bat sounds?



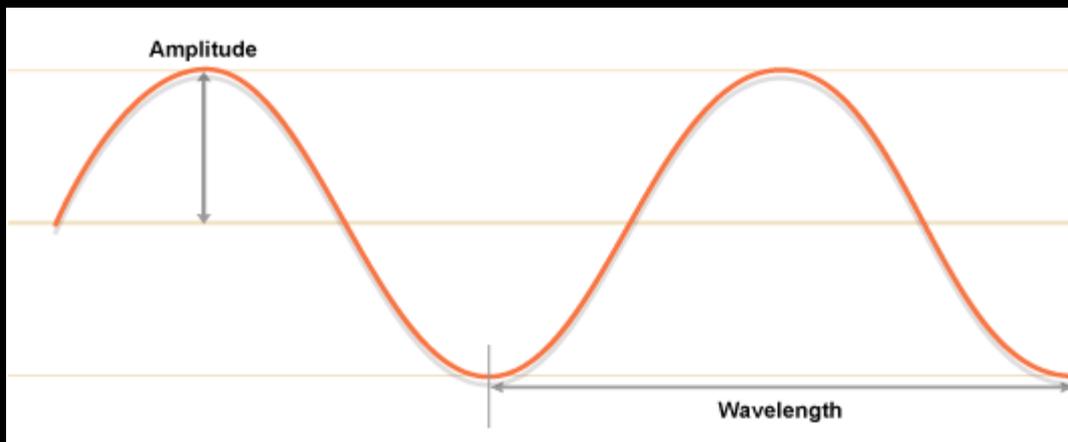
How do we measure a bat sound?

The frequency of a sound wave is;
the number of waves produced by a source each second &
the number of waves that pass a certain point each second.

The unit of frequency is the hertz (Hz). For bats high
frequency calls we use kilohertz (kHz), 1 kHz = 1,000 Hz.

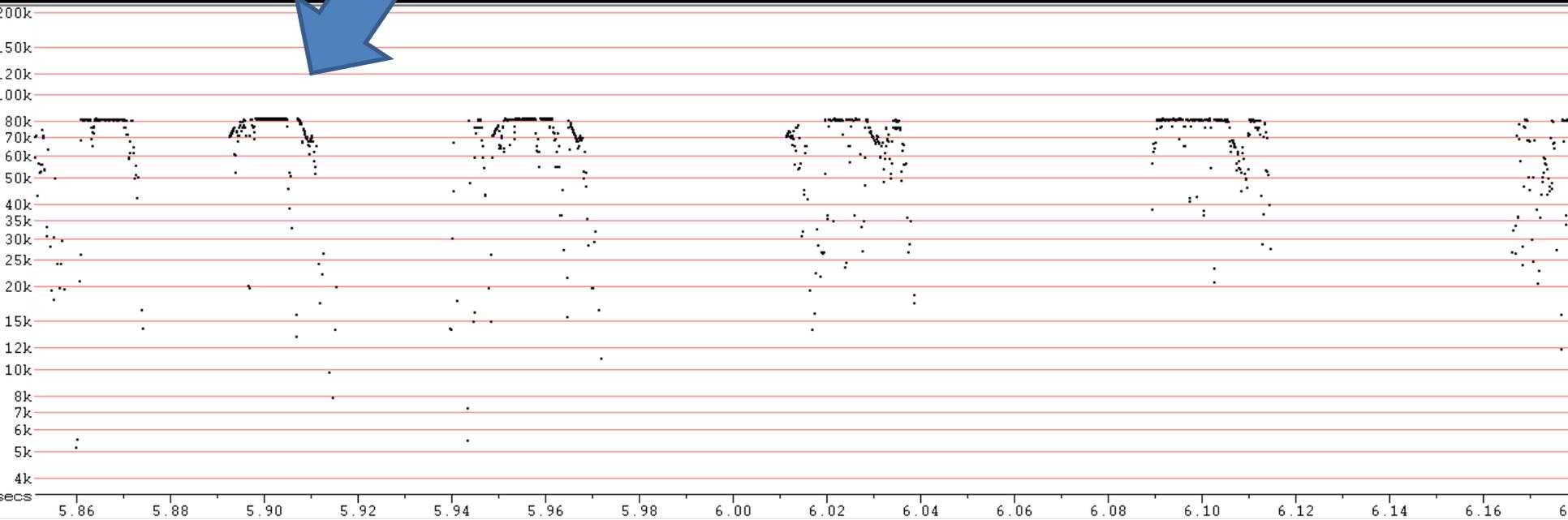
Most people cannot hear a high-pitched sound above 20 kHz

A greater horseshoe bat echolocates at 80 kHz, this means
they emit about 80,000 sound waves per second!



Sonogram of a greater horseshoe bat

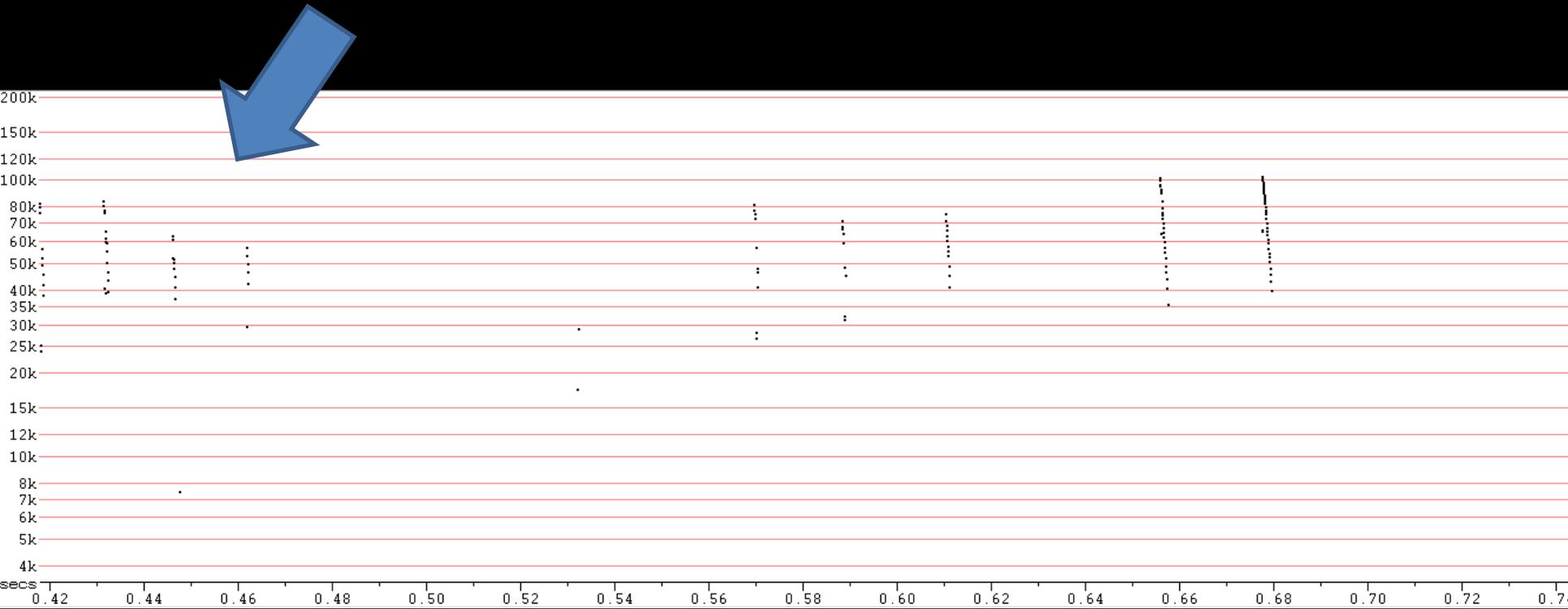
80 kHz – staple shape



Time in seconds

Sonogram of a Bechstein's Bat

40-80 kHz – linear shape



Time in seconds

Detectors can tell us.....

- if there is a roost is close by
(e.g. if the calls are at sunset)
- If the bats are feeding (feeding
'buzz')
- whether they are making social
calls
- how many times a bat passes
by



Detectors can't tell us.....

- how many bats there are
- If they are they male or female
- how old they are
- If they are healthy
- what the bats are feeding on



How can we find out more ?

- bats are a protected species, so you are not allowed to disturb them !
- but licensed bat workers are allowed to enter roosts and carry out other survey work



Paul Kennedy

How can we find out more ?

- check roosts to count numbers – emergence counts in the summer months
- use roost cameras to help track pup numbers
- count numbers of young bats
- catch and ring bats – this tell us about age, sex, health, whether it has been caught before
- Monitor condition of roost itself e.g. temperature and humidity





Bats –
fascinating
but difficult to
study!