DO DRUNK BIRDS SLUR WHEN THEY SING?

$5 million
Oregon
National Institutes of Health

Like drunks at a karaoke bar, inebriated birds slur when they sing, according to research supported by National Institutes of Health (NIH).

The project examined the impact of alcohol on the speech impairment of birds was conducted by the Oregon Health & Science University with funding provided from three separate NIH grants totaling more than $5 million.[78]

The birds in the study, zebra finches, were served and mixed drinks made of white grape juice and ethanol.[79] The cocktails had "about six percent alcohol concentration, similar to many commercial beers."

"We just showed up in the morning and mixed a little bit of juice with 6 percent alcohol, and put it in their water bottles and put it in the cages," explains Christopher Olson. "At first we were thinking that they wouldn't drink on their own because, you know, a lot of animals just won't touch the stuff. But they seem to tolerate it pretty well and be somewhat willing to consume it."[80]

"Zebra finches will consume alcohol when it is provided to them, resulting in elevated blood ethanol content (BEC)," the researchers note.[81] "We found that when zebra finches drink alcohol, they can reach BECs comparable to those commonly seen in humans, which measurably affects their song."[82]

The drinking habits developed by the birds could be considered "risky," with one bird bordering on "binge drinking."[83] A "binge," according to NIH, "is a pattern of drinking alcohol that brings blood alcohol concentration (BAC) to 0.08 gram percent or above. For the typical adult, this pattern corresponds to consuming 5 or more drinks (male), or 4 or more drinks (female), in about 2 hours."[84]

"Since the finches freely consumed the drinking solution the degree of intoxication was dependent on the drinking characteristics of each bird. Thus, alcohol consumption was not directly forced, but a fresh water alternative was not provided," the researchers explain.[85]

Getting drunk "does not visibly affect" the birds' "general behaviors, willingness or motivation to sing, or variability of vocal output," according to the researchers.[86]

The songs of inebriated birds are "a bit quieter and just a little slurred, or as Olson puts it, 'a bit less organized in their sound production' — like a roommate calling from a bar to get a ride home."[87]

"The most pronounced effects were decreased amplitude and increased entropy, the latter likely reflecting a disruption in the birds' ability to maintain the spectral structure of song under alcohol. Furthermore, specific syllables, which have distinct acoustic structures, were differentially influenced by alcohol, likely reflecting a diversity in the neural mechanisms required for their production. Remarkably, these effects on vocalizations occurred without overt effects on general behavioral measures, and importantly, they occurred within a range of BEC that can be considered risky for humans."[88]

"To assess whether alcohol affects the motivation to sing," the researchers "analyzed whether it affected the number of bouts sang, the numbers of motifs within each bout, or the number of lead notes prior to each bout during the 60 minutes of recording following the introduction of the target female to the recording chamber."[89]

"In the presence of females, male zebra finches reliably produce female-directed song as part of their courtship behavior. Cages were set up for singing males to perch and sing towards a female, and into a microphone at the opposite end of the female's cage. Cages were fit into acoustically isolated boxes."[90]

"Overall, alcohol has clear effects on zebra finch song, researchers conclude.[91]

So now that we know drunk birds slur when they sing, what do the researchers hope to explore next? Olson would like to study "whether alcohol affects not just how birds sing but how they learn new songs."[92]

Spending more on these types of bird-brained studies sounds cuckoo to taxpayers.