Group 3

You are an ornithologist doing field work in the jungle of Papua New Guinea, studying the rare black sicklebill (*Epimachus fastosus*), one of the birds-of-paradise. Birds-of-paradise are very attractive study subjects because the public loves documentaries where the birds dance around their elaborated nests while showing off their feathers. You are currently on a field study in a dense forest on a mountain top, which is threatened by a new development for rubber production. Nobody else has properly inventoried the fauna on this hill yet. Moreover, this may be the last study of this magnitude taking place in this area before the developers go in. Besides all that, your project funding is coming to an end. Your academic career is not moving well and could use a spectacular publication.

After weeks of insect bites and pouring rain, you managed to capture 7 birds of which 4 males. You get the impression that the male sicklebills you caught on this hill have a longer bill than the ones you have encountered elsewhere. Could it be a different species? Excited, you measure their bills and obtain 4.9, 4.0, 5.1 and 6.0 cm. You check the literature and find an authoritative study that claims the length of the bill of male black sicklebills to be 3.5 cm. You apply a t-test on your observations and find an average bill length of 5.0 cm with a P-value of 0.03 for the null hypothesis of it being 3.5 cm.

Do you start to write a paper aiming for a high ranked nature conservation paper claiming that you found a new bird-of-paradise species?

How do you interpret the P-value of 0.03 in this case?