1145-VM-1328 **Thomas J Osler*** (osler@rowan.edu) and **Marcus Wright**. *An unexpected random walk.* Preliminary report.

Consider tossing a fair coin yielding heads H or tails T, equally likely . You toss the coin 100 times. Suppose you get H 55 times and thus T 45. The difference 55– 45 is 10. We will say that the head-tail difference (HTD) for this toss is 10. The HTD will always be considered non-negative, regardless if the toss yields more heads or more tails. Now reflect on the possible values of the HTD in 100 tosses of the coin. It could be 0 if H = D, (although this is unlikely), or it could even be 100 if either D or T is zero, (again even more unlikely). So it seems to be more likely that $0 < \text{HTD} < 100$. In fact on closer reflection, we expect the HTD to be closer to 0 than 100. The answer is 8! We show how this arrives. Now we ask the question, after tossing the coin N times again and again, many times, what is the expected HTD? The answer is surprising (Received September 21, 2018)