Humming Bird problem.

To stay floating (airborne) at a certain position the humming bird flaps its wings at an average rate of 100 downward strokes per second. Each wing is 5 cm long and sweeps a total angle of 80° during each stroke. The mass of the bird is 0.2 kg.

Find the work done by the bird to maintain its hovering position.

Dynamics Book Problems
4.1.2, 4.1.8, 4.1.21, 4.2.28, 4.3.12, 4.3.21

Bonus Problems
5.1.16, 5.1.23

Recommended Problems
4.1.3, 4.1.9, 4.1.20, 4.2.6, 4.2.29, 4.3.16