

habit of hiding its surplus food ; it always hunts it up when in need of it again. I also possess two great Horned Owls and they also hide their food when satisfied, returning to it again when hungry. Watching the movement of these birds led me to think that they must be able to reason in a small degree. I hope to be soon able to send you an electrotype of my Deer head, so that you can insert it at the head of my advertisement.

I am yours, &c.,

R. B. SCRIVEN.

Gravenhurst, Ont., }  
25th March, 1881.

Note.—Mr. Scriven is just the kind of man we want to hear from periodically. His questions are so far interesting and in order, as they invariably lead to the advancement of our knowledge of Natural Science. In regard to the Deer horns, our answer was given in harmony with his description and drawing. We could not answer otherwise, as all the North American *Cervide* are described. It may be possible that the heads in his possession are those of a supposed deer called the Little Moose, said to occur in the northwestern forests. We have no knowledge of the animal excepting from correspondence. We do not believe birds can reason. They are doubtless provided with acute instinct, and the hiding of food when not required by them is a force of habit derived from the stability of the species through ages past. The crow family possess it to an extraordinary degree ; they not only hide their surplus food but steal and hide every light article they place their eyes on. For instance the European Jackdaw and our Blue-Jay.

SIR,—I see in your March number a letter, signed "Hammerless Greener," in which he states he has made an extraordinary pattern with 2½ drams of powder and ½ an ounce of shot ; but he does not say anything about the penetration. For the last five years I have fired upwards of ten thousand shots at Pettit's Pads, and lately at a Force Gauge made on the same plan as the "Field Gauge" used at the London Gun Trials of 1879, excepting I use a pendulum (3 feet long) with a circular plate 5 inches diameter, instead of a 10 inch plate, attached to a platform suspended by four rods.

I have tried 2½ drams of powder (C. & H's No. 6) and ½ an ounce of No. 6 Newcastle Chilled (270 pellets to the ounce) with three 12 bores by W. W. Greener. I send you the average of 12 shots with the above charge, and also the average of charges that suit my guns best, so that your correspondent can compare them. I always fire from a rest in which the gun is held, the recoil being taken by a leather breeching passed round the heel plate:

Hammerless Gun, 30 inch barrels, weight 8 pounds.

Charge.	Pellets on Gauge, 5 in. diam.	Force per pellet.	Final velocity, ft. per sec.	Pattern, 10 in. circle.	30 in. circle.
2½ dr's p'r, ½ oz. s.t., 4	4	2.12	572	8	97
3½ " " 1 " " 14	14	2.41	651	55	222

No. 2 Gun, 30 inch barrels, weight 8 pounds 10 ozs.

2½ dr's p'r, ½ oz. s.t., 2	2	1.95	526	11	63
3½ " " 1 " " 10	10	2.37	610	43	204

No. 3 Gun, 28 inch barrels, weight 7½ pounds.

2½ dr's p'r, ½ oz. s.t., 7	7	1.80	486	16	71
3½ " " 1 " " 8	8	2.23	602	47	198

Out of the thirty-six shots fired, four balled with No. 3 gun, and one with No. 2 gun. Throughout the trial the pattern was very uneven, being in clusters, appearing as if the shot had balled on leaving the gun and separated a few yards in front of the target. According to my experiments a force of 2.40 is equal to about 30 sheets of the pad. Could "Hammerless Greener" suggest any other charges, etc., I would be most happy to give them a trial at my force gauge and report the result through your columns, providing you would kindly grant me space.

Yours truly,

12-BORE GREENER.

Lachine, P.Q., April 5, 1881.

### INSECTIVOROUS BIRDS.

ARE THEY BENEFICIAL TO THE FARMER AND FRUIT GROWER.

SIR.—In the Eleventh Annual Report of the Entomological Society of Ontario, the President, Wm. Saunders, in his annual address, states his conviction that but comparatively little help is got from birds in keeping in subjection injurious insects, and having examined the contents of the stomachs of a large number of birds, he has only found occasionally an injurious insect therein. He mentions the swallows, *Hirundinide* ; kingbird, *Tyrannus Carolinensis* ; pewee, *Sayornis fuscus* ; night-hawk, *Chordeiles popetue* ; yellow warbler, *Dendroica astica* ; red start, *Septophaga*