

requisite gift, in view of the strong probability that it will lead to a great advance in our knowledge of the heavenly bodies. Any one interested in this plan is invited to address the undersigned.

EDWARD C. PICKERING,

Director of the Observatory of Harvard College.
Cambridge, Mass., U.S.A., September, 1892.

Naltunne Tunne Measures.

WHEN the writer was at the Siletz Agency, Oregon, in 1884, he obtained the following units of measurement from Alex. Ross, the chief of the Naltunne tunne, an Athapascan people:—

1. The double arm's length, from the meeting of the tips of the thumb and forefinger of one hand to the meeting of the tips of the thumb and forefinger of the other hand.

2. Single arm's length, "one arm," extending from the tip of the middle finger along the extended arm to the shoulder-joint.

3. From the middle of the sternum along the extended arm to the meeting of the tips of the thumb and index finger.

4. From the inner angle of the elbow to the meeting of the tips of the thumb and index finger.

5. From the middle of the fore-arm to the meeting of the tips of the thumb and index finger.

6. From the first wrinkle of the wrist to the meeting of the tips of the thumb and index finger.

7. The width of the hand (when grasping a stick), "one grasp," equal to the width of four fingers (No. 11).

8. One finger width. 9. Two finger widths. 10. Three finger widths.

11. Four finger widths (the hand being open), equal to No. 7.

12. Five finger widths (including the thumb).

13. From the joint of the right shoulder horizontally across the body to the meeting of the tips of the thumb and forefinger of the extended left arm.

14. From the tip of the right elbow (the right arm being bent and held horizontally, the hand touching the shoulder) horizon-

tally across the body to the tip of the middle finger of the left hand, the left arm also being extended horizontally.

J. OWEN DORSEY.

Takoma Park, D.C., Sept. 13.

Omaha Arrow-Measure.

THE Omaha use the following as their arrow-measure: From the inner angle of the elbow to the tip of the middle finger, and thence over the back of the hand to the wrist-bone.

J. OWEN DORSEY.

Takoma Park, D.C., Sept. 13.

BOOK-REVIEWS.

Elementary Text-Book of Entomology. By W. F. KIRBY. Second Edition. Revised and augmented. Ill. New York, Macmillan & Co. 281 p. 8°. \$3.

ENTOMOLOGISTS everywhere will welcome with pleasure this new edition of Kirby's handbook of reference to the study of insects. As compared with the first edition of the work, we find the present one improved by the addition of a carefully prepared index, and by an appendix and table of contents. The appendix adds considerable new and valuable matter, while the last-named feature answers admirably to present the main divisions of the classification of insects used by the author. Various schemes of the latter are briefly discussed in the introduction, but our space will only admit of our saying here that seven orders are adopted to which the lesser groups of all insects are referred. These are the *Coleoptera* (including *Strepsitera*), *Orthoptera* (including *Euplexoptera* and *Dictyoptera*), *Neuroptera* (including *Trichoptera*, *Thysanura*, *Collembola*, *Mallophaga*, and *Thysanoptera*), *Hymenoptera*, *Lepidoptera*, *Hemiptera* or *Rhynchota* (including the suborders *Hemiptera*—*Heteroptera* and *Hemiptera*—*Hemoptera*, and the *Anophura*), and *Diptera* (including *Aphaniptera* and possibly *Achreioptera*). Our author tersely defines these several

Publications Received at Editor's Office.

DOBBIN, L. and WALKER J. Chemical Theory for Beginners. New York, Macmillan & Co. 16°. 244 p. 70 cts.

GEOLOGICAL SURVEY OF TEXAS. Annual Report, 1891. Austin, State. 8°. Paper. 470 p.

KIRBY, W. F. Elementary Text-Book of Entomology. New York, Macmillan & Co. 8°. 282 p. Ill. \$3.

WILKINSON, GEORGE. The Voice. 16°. Paper. 72 p.

Reading Matter Notices.

Ripans Tabules: for torpid liver.

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FOR SALE.

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is in preparation, and will be issued at an early date.

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For Sale or Exchange.—The subscriber would like to receive cash offers, or an offer in exchange for the earlier volumes of Poggenдорff's *Annalen* and the later volumes of Silliman's *Journal*, upon the following list: Chenn—*Manuel de Conchyliologie*. 2 vols. Nearly 5,000 figures, some hand-colored. Paper. Paris, 1859. Edwards.—*Butterflies of N. A.* 2 vols. Plates hand-colored. Vol. I., half calf. Vol. II. in parts. Leyman, Agassiz, Hagen.—*Ills. Cat. Mus. Comp. Zool.* at Harvard. No. I. *Ophiuridae*. No. II., *Acalephae*. No. III., *Astacidae*. All bound in one volume. American Naturalist. Vols. I.—VII. Cloth. Silliman's *Am. Jour. of Science and Arts*. Third Series. Vols. I.—X. Cloth. Binney.—*Terrestrial Mollusks of N. A.* Colored plates. 4 vols. Stretch.—*Zygaenidae and Bombycidae of N. A.* Colored plates. Also a considerable library of monographs, reports, and scientific books, and a large number of duplicates of fossils, minerals and shells. E. A. STRONG, Ypsilanti, Mich., Sept., 1892.

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