ART. LXI.—*Note on the Cretaceous rocks of Northern California*; by J. S. DILLER.

WHILE preparing a geologic map of the northern portion of the Sacramento Valley, two sections about 30 miles apart of the unaltered Cretaceous rocks upon its western border north

of the 40th Parallel were measured by Mr. J. Stanley-Brown and myself. The measurements were made with Green's square clinometer compass and a hundred-foot wire. Many fossils were collected along the lines of the sections as well as upon both sides. They have been identified by Mr. T. W. Stanton, under the supervision of Dr. C. A. White, who kindly furnished information concerning the age of the rocks.

Section on Elder Creek, Tehama Co., Cal.

		Thickness in feet.
Chico Beds.	Thin sandstone with a large portion of shales which are locally folded.....	1115
	Massive sandstone with a few thin beds of shale.....	160
	Shales containing one bed of sandstone 25 feet thick.....	665
	Massive sandstone.....	555
	Soft conglomerate containing Chico fossils.....	20
Chico Beds.	Massive sandstone with thin conglomerates....	397
	Shales.....	136
	Massive conglomerate containing some limestone pebbles.....	271
	Sandstone, some shale and thin beds of conglomerate.....	320
	Massive conglomerate.....	43
Horsetown Beds.	Some sandstone and shale, but chiefly conglomerate with Chico fossils.....	235
	?—— Apparent thickness of Chico beds,	3897
	Shales with thin sandstones.....	552
	Shales.....	585
	Sandstone.....	50
Aucella, probably Knoxville Beds.	Shales containing two beds of sandstone, one 8 ft. and the other 12 ft. in thickness.....	2090
	Shales and thin sandstones.....	1674
	Sandstones and shales, then shales only.....	1158
	?—— Apparent thickness of Horsetown beds,	6109
	Shales, twisted and veined, containing <i>Aucella</i> ..	1795
Aucella, probably Knoxville Beds.	Shales with calcareous layers, (much covered)..	4968
	“ “ “	5574
	Shales in belt 700 feet wide much folded.....	
	Shales and shaly sandstones with calcareous layers	2002
	Shales and shaly sandstones,—small sandstones increase, contain <i>Aucella</i>	3933
Aucella, probably Knoxville Beds.	Shales and thin sandstones ..	1702
	Apparent thickness of unaltered <i>Aucella</i> beds,	1,9974
	Apparent total thickness of unaltered Cretaceous strata.....	2,9978

The top of the Chico beds was not exposed. It lies beneath the newer formations which occupy the middle portion of the Sacramento valley. The apparent thickness of the series may have been somewhat increased by faulting.

Section on North Fork of Cottonwood Creek, Shasta Co., Cal.

Shales containing Chico fossils.....	621
Shales with this sandstones	180
Shales	1908
Conglomerates and sandstones with many Chico fossils.....	914
Thickness of Chico beds,	3623
Shales including 10 feet of sandstone contains numerous Horsetown fossils.....	2870
Shales with some sandstones contains numerous Horsetown fossils	1787
Sandstone with coarse conglomerates at base of series	561
Thickness of Horsetown beds,	5218
Apparent total thickness of unaltered Cretaceous,	8841

The top of the Chico as in the other section was not exposed. The apparent thickness of the series may have been somewhat increased by faulting, a condition suggested by the occurrence of Chico fossils near the western limit of the Cretaceous rocks. Aucella was not found in this section, and the basal member of the series rests directly and unconformably upon the metamorphic rocks.

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