

manure increases the scab, probably because alkaline. On the other hand, oxalic acid tends to reduce the scab. It is thought that anything which reduces the acidity of the soil will increase the scab. The scab fungus seems to multiply in the soil when the potato crop is not present. Upon acid soils practical immunity from scab has been secured for three years. Upon acid land potatoes free from scab may be grown if no barnyard manure is used.

#### CHERRIES.

UNDER the above short title Prof. Bailey and Mr. Powell have prepared a bulletin (No. 98 Cornell University Experiment Station), giving among other things the classification of cherries under the horticultural groups; namely sours, amarells and morellos, sweets, mazzards, hearts, begarreaus and dukes, and then the botanical grouping. There are two species, namely, *Prunus cerasus* L., the sour cherries, and *P. avium* L., the sweet cherries, with three well-marked varieties under the latter species.

Cherry growing is a neglected industry. The tree likes a rich loamy soil with frequent cultivation. The worst enemy is the curculio, and jarring the trees will save many cherries. For the rot spraying with Bordeaux is recommended. The bulletin is illustrated with several engravings of fruits made from photographs of subjects natural size.

#### CURRENTS.

NEW YORK STATE can boast of two Experiment Stations, one, the older, at Geneva, and the other at Ithaca. Both have their number of issues in the nineties, while, for example, No. 98 of the Cornell University Station is upon cherries, briefly mentioned in the previous paragraph, the No. 95 of the New York Station deals with currants. Prof. Beach, in this, informs the readers that the testing of varieties of currants began at Geneva in 1882 with eleven sorts.

Now there are forty under study and this exclusive of seedlings. It is shown that of the red sorts the Prince Albert is the largest bearer, it averaging nearly nine pounds per plant. The White Dutch is the most productive of the white sorts. But it seems from the bulletin that quantity is not everything, for healthfulness of bush, shipping quality and flavor of the berry must all be considered. One sort may be too watery for profitable jelly making or have a skin too thick for jam, etc. The reader of these bulletins upon fruits is led to imagine that the stationists practice all the phases of the culinary art in order to pass judgment upon their subjects.

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#### CURRENT NOTES ON ANTHROPOLOGY.

##### SOUTH AMERICAN LINGUISTICS.

DR. RODOLFO LENZ continues his valuable contributions to the study of the Araucanian stock by the publication of a series of dialogues in the Picunche dialect. His presentation and analysis are fully up to the requirements of modern scientific linguistics. His article appears in the 91st volume of the 'Anales de la Universidad de Chile.'

The tireless student of the Argentinian languages, Samuel A. Lafone Quevedo, publishes in the 16th volume of the 'Boletín del Instituto Geographico Argentino' an essay of over forty pages on the Vilela or Chulupi language of the Chaco. His material is mainly from the works of Hervas, Adelung and Pelleschi. The results he reaches confirm the statement of affinities between the Lule and Vilela tongues which I advanced in my 'American Race,' p. 313 (1891). That these related dialects should be classed with the Pacific or Andean tongues on account of their suffix formations and personal pronouns, is not yet sufficiently demonstrated.

The journal 'Languages' (published in London) stated in June last that the British consul in Bolivia had discovered some hitherto unknown native idioms in that country; but no further information about them has appeared.

#### THE DIMINUTION OF NATALITY.

THIS subject occupied a prominent place in the discussion of the anthropological section of the French Association for the Advancement of Science at its last meeting. More than elsewhere, it deserves attention from the scientists of that nation, for out of the 86 departments into which France is divided, in 51 the deaths exceed the births. The annual natality for the whole country is only 23.7 for each 1,000 inhabitants, and this number includes the still-born!

To remedy this progressive depopulation, its causes must be ascertained. Dr. E. Maurel brought forward an interesting theory. He pointed out that the birth rate is lowest in those departments where food is most abundant and cheapest. The relation between these two facts he held to be the prevalence of hereditary arthritic diathesis (uric acid diathesis), leading to diminution of reproductive vigor in both sexes, this diathesis arising from excessive alimentation. Another speaker, Dr. Pommerol, attributed the diminished natality to voluntary restriction, while others suggested the increase of religious celibacy, the laws relating to the division of property, the lateness of marriages, and the decreased reproductiveness of women.

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#### SCIENTIFIC NOTES AND NEWS.

##### VIVISECTION IN THE DISTRICT OF COLUMBIA.

DURING the recent session of the National Academy of Sciences a report was prepared with reference to the proposed legislation interfering with the practice of vivisection in the District of Columbia. The report states that

physiology must be studied by experimental methods. The physiologist, no less than the physicist and the chemist, can expect the advancement of his science only as the result of carefully planned laboratory work. If this work is interfered with medical science will continue to advance by means of experiment, for no legislation can affect the position of physiology as an experimental science. But there will be this important difference: The experimenters will be medical practitioners and the victims human beings. That animals must suffer and die for the benefit of mankind is a law of nature, from which we cannot escape if we would. But the suffering incidental to biological investigations is trifling in amount and far less than that which is associated with most other uses which man makes of the lower animals for purposes of business or pleasure. The men engaged in the study of physiology are actuated by motives no less humane than those which guide the persons who desire to restrict their action, while of the value of any given experiment and the amount of suffering which it involves they are, owing to their special training, much better able to judge. When the men to whom the government has intrusted the care of its higher institutions of research shall show themselves incapable of administering them in the interest of science and humanity, then, and not till then, will it be necessary to invoke the authority of the national legislature.

##### RADIATION FROM URANIUM SALTS.

IN an important article in *Nature* (Apr. 23), Prof. J. J. Thomson states that the investigations of M. Henri Becquerel on the radiation emitted by certain salts of uranium have shown the existence of a kind of radiation intermediate in its properties between light and the Röntgen rays. These investigations are exceedingly interesting on account of the differences as well as the analogies they disclose between the uranium radiation and the Röntgen rays. M. Becquerel has shown that the radiation from the double sulphate of uranyle and potassium is analogous to Röntgen rays, inasmuch as it can affect a photographic plate after penetrating substances such as aluminium, copper, wood, etc., which are opaque to ordinary light; it also resembles