

New or Interesting California Fungi II.¹⁾

By Edwin Bingham Copeland.

(With Table XII.)

***Omphalia californica* n. sp.**

Pileo carnosulo, 1—2 cm lato, primo margine inflexo crenatoque, centro mox depresso, denique vulgo infundibuliformi, pallido-brunneo, glabro; lamellis circa 30, valde inaequalibus, postice latissimis, triangularibus, cum stipite roseis pallescentibus; stipite farcto, 1—2 cm alto, 2 mm crasso, cartilagineo, utrinque glabro; sporis circa $4 \approx 3 \mu$.

Ad terram sub quercubus. Chico.

Omphaliae umbelliferae affinis.

***Coprinus Bakeri* n. sp.**

Pileo cylindrico-campanulato, mox inter lamellas fisso, primo dense tomentoso-floccoso, glabrescente, disco cervino, marginem versus nigrescente, substriato; lamellis 6—10 mm longis, 1,5 mm latis, liberis vel subliberis, nigris; sporis nigris, vel luce transmissa fuscis, ovatis, $11-13 \approx 7-8 \mu$; stipite 3—4 cm alto, 2—3 mm crasso, fibroso-farcto, basim versus leniter incrassato.

Ad medullam *Yuccae* sp. Claremont. Legit C. F. Baker.

A *Coprino sulcato* McClatchie (ut descripto) forma lamellarum, pileo apud discum non striato nec stipite cavo distincto.

***Polyporus polychromus* n. sp.**

Solitarius vel superimpositus; pileo laterali subfixo, reniformi, 4 cm longo, 6 cm lato, suberoso, extus azono, pulvinato; pellicula tenui, secedente, ad marginem citrinum obtusum deficiente; contextu apud stratum tubuliferum saturate fusco, sursum usque ad stratulum suppelliculum flavum pallescente, obscure concentrico-zonato; poris irregularibus, inaequalibus, apud basim minutis, ad 8 mm altis, intus cinereo-fuscis, oribus viridulo-albis; sporis $10 \approx 7 \mu$, obovatis, subfuscis.

Ad truncum mortuum *Quercus lobatae*. Prope Stanford Universitatem.

Ob colores superficiei contextusque inter Suberosos distinctissimus.

***Trametes Sequoiae* n. sp.**

Varia; nunc pusilla, sparsa, nunc pileis confluentibus, nunc late et indeterminata effusa, interdum pileo uno alterum subtegente; fere tota resupinata, suberosa, semper glabra, plus minus arcte adnata, cinereo-fusca; poris albidis, subrotundatis, inaequalibus, vulgo minus 1 mm latis, ad 8 mm altis vel in pileis obliquis altioribus.

¹⁾ The first paper with this title appeared in this journal, Vol. 2, page 1, 1904.

Ad lignum ustum *Sequoiae sempervirentis*. Woodside.

T. affini similis.

***Solenia gracilis* n. sp.**

Sparsa; cūpulis primo urceolatis, brevissime stipitatis, demum cylindraceis, denique late sessilibus, sursum attenuatis, oribus incrassatis, integris, glabris, stramineis nitentibus, vel candidis et deorsum fuscescentibus, 0,5 mm altis; sporis globosis 7,5—8 μ diam.

Ad lignum putridum *Alni*. Saratoga.

Variation in *Verpa*.

I have, with some hesitation, referred a *Verpa* collected on the Stanford University campus and in the mountains near it to *Verpa conica* (Mueller) Swartz. Mean specimens agree reasonably well with the description, having campanulate, rich brown ascomata, not much wrinkled, and a transversely rugose yellowish stipe, hollow at maturity and brittle. The stipe is 5—8 cm high, less than 1 cm in diameter and uniform, and the pileus about one fourth the height of the stipe.

From this typical form (Fig. 1), individuals vary extremely; two illustrations will convey an idea of how widely (Figs. 2 and 3). One has a smooth, flaring ascoma, and an irregular, ventricose stipe, 2 cm in diameter. The other has an almost flat, umbonate top, more than 1,5 cm in diameter, the whole of the rugose ascoma being 22 mm wide and scarcely 13 mm deep, with a stipe only 14 mm high by 4 mm thick.

Both this and the following species vary very considerably in the irregularity of the surface of the ascoma. Young specimens of both are practically smooth, and some old ones remain so. There is every gradation between these and those so wrinkled, — and especially longitudinally — as to strongly suggest *Morchella*. They do not however become as deeply or regularly wrinkled as the smoothest *Morchellas*; nor in the same way, by the formation of ridges on an approximately flat background. In this part of the world the two genera are more distinct in this respect than in the attachment of the ascoma to the stipe.

A considerable collection of *Verpa* from near Chico can not be satisfactorily ascribed to any old species, and therefore, at the risk of adding to the confusion in this genus of ill-defined species, I describe it as new.

***Verpa chicoensis* n. sp.** Figs. 4, 5.

Ascomate campanulato, 12—20 mm alto, 15—30 mm lato, alto-umbilicato, primo levi, laete brunneo, demum fusco nigrescente, plus minus corrugato vel semper integro, margine inflexo; sporidiis ellipsoideis, 20—25 $\approx$ 12—13 μ ; ascis 200—230 $\approx$ 16—20 μ , deorsum irregularibus, parce paraphysatis; stipite aequali, flavo, transversim corrugato, fragili, vulgo 6 cm alto, 8 mm crasso, tarde fistuloso.

In nemore graminoso, prope Chico.

Helvella.

I have a number of *Helvellas* collected about Stanford University and about Chico, during and prior to April, 1903. Prof. Dudley has sent *Helvellas* from the former locality to Prof. Peck for determination, some of which I believe are new species not yet published. As it was not possible for me to consult duplicates of any of the material sent to Prof. Peck, I am still leaving the Stanford species untouched.

The Chico *Helvellas*, of which I have two or three hundred specimens, resolve themselves into two variable species. They grew together, along with *Verpa* and *Morchella*, in a grove on the bank of Butte creek. They are named *H. Faulknerae* and *H. Hegani*, after the owners of the ranch. They are best distinguished by their stipe characters, one having a stout, hollow stipe, smooth except for the base, while the other's is slender and furrowed into narrow solid plates, as drawn (Fig. 6). Except in very small specimens, the difference in the stipes maintains its full force.

The ascomata too are sufficiently distinct, not varying so as to meet at all, but enough so that the relation between the two forms is very evident. The ascoma of *H. Faulknerae* is usually longest at a right angle to the longest diameter of a cross section of the stipe. At one extreme of its variability are the ascomata whose peripheral growth is only excessive enough to produce an undulate margin. In the most common form this waviness is carried to the point where the two sides are elevated to approximately vertical and the ends are somewhat depressed. At the other extreme the sides stand up almost together, and the ends are forced down along the stipe, rarely touching it and adhering.

The gap between sides close together and sides touching and cohering is what separates the species. In *H. Hegani* they meet and cohere, and the further increase in area of the ends makes each spread out as a more or less plane surface, with its back, — at least the upper part where the stipe does not interfere, — appressed to the back of the other. I have specimens of *H. Hegani* in this condition, with the hymenium continuous over the fold at the top. Almost always, though, the tension is sufficient to break it along this line along one side or both, giving rise to two free lobes, which are opposite the flattened sides of the stipe. Each lobe is then variously moulded and complicated by the overgrowth of its surface. In extreme cases folds meet and cohere, and a third lobe is formed. As would be expected, it is the rule in this species for the lower part of the ascoma to touch the stipe and adhere in some places, though it is not rare for it to be free. The freedom of the stipe from the folds of the ascoma, being a function of the complication of the latter, is not to be regarded as an independent specific character.

Helvella Faulknerae n. sp. Figs. 6, 7.

Ascomate glabro, cupulato-elliptico 1.5—4 cm longo, concavulo cum margine elato undulato, vel saepius lateribus duobus late elatis et margine

inter ea valde deflexo, infra ochroleuco; hymenio atro; ascis $320 \approx 13-15 \mu$, sporidiis ellipsoideis $21 \approx 12 \mu$, paraphysibus hyalinis, septatis, $2.5-3 \mu$ crassis, ad apicem incrassatulis; stipite gracili, obcompressulo, glabro, stramineo, profunde sulcato.

Ad terram alluviam in nemore gregaria, prope Chico. 2.5—6 cm alta.

Helvella Hegani n. sp. Figs. 8, 9.

Ascomate 2 (rarius 3)-lobato, lobis sursum tergis adpresso-versis, deorsum late revolutis, ubique $\pm$ flexuosis vel bullatis, infra fulvo; hymenio fusco nigrescente, continuo vel discreto; ascis $330 \approx 17-18 \mu$, sporidiis ellipticis $20-22 \approx 13 \mu$, paraphysibus tenuissimis, septatis, ad apicem incrassatis; stipite glabro, crassulo, cavo vel intro enteromorpha, sursum integro obcompressulo, pede lobato.

Ad terram alluviam in nemore, gregaria, prope Chico. 3—6 cm alta.

Explanation of Plate XII.

All figures natural size.

Fig. 1. *Verpa conica* (Mueller) Sw.: mean form.

Fig. 2, 3. *V. conica*: two extremes.

Fig. 4. *V. chicoensis* Copeland n. sp.

Fig. 5. *V. chicoensis*: longitudinal section.

Fig. 6. *Helvella Faulknerae* Copeland n. sp.: a large specimen, and section across its stipe.

Fig. 7. *H. Faulknerae*: small specimen.

Fig. 8. *H. Hegani* Copeland n. sp.: a large specimen.

Fig. 9. *H. Hegani*: side view of same individual.