

water, and placed on agar. The part-pileus was dead, but the whole one soon formed a spore print and, since there was very little contamination and practically every *Schizophyllum* spore germinated, I readily obtained pure cultures, the hyphae of which developed clamp-connexions. The living pileus was removed from the agar after two days, placed on a slide in a damp chamber, remoistened and moved each day: it continued to produce spores sufficient to make a visible spore-print until March 31. Meanwhile rudiments of new pilei developed near the margin, one grew to 10 × 6 mm., and from its gills spores were shed so as to make a spore print from March 23 until April 2. This total of 24 days of spore production may be a record for the species; at least it shows that the fungus had maintained its vitality.

A few of the remaining fruit-bodies collected during October 1909 were taken by Dr. Buller to Birmingham where, on June 5, 1912, they were sealed in a very high vacuum "at about the X-ray stage"¹. I opened one of these tubes on March 1, 1945; it contained two pieces of pilei, one of which shed spores normally when moistened.

Two or three of the vacuum tubes of 1910 were taken by Dr. Buller to Birmingham and immersed in liquid air (−190° C.) for three weeks in 1912. One was then opened, as noted above. I opened another on March 8, 1945; it contained one piece of pileus which shed spores normally. I obtained pure cultures also from these spores.

Eleven of the vacuum tubes remain for future tests. The four opened each contained a specimen still living 35½ years after it had developed, 34¼ (or, in one instance, 32¾) years of which were spent *in vacuo*. This is a noteworthy maintenance of 'suspended vitality'. Additional evidence is provided in favour of Buller's theory³ that an agaric which sheds spores is alive, and that spores discharged normally are capable of germination.

I do not know whether anyone has tested recently the retention of vitality in *S. commune* kept in 'dry' air. Buller¹ reported that pilei exposed to the unusually dry air of a room in Winnipeg were still alive after 6¼ years. A pileus collected at Canterbury on February 1, 1935, and filed in Kew Herbarium, revived after moistening on March 7, 1945, and shed normal spores.

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¹ Buller, A. H. R., *Trans. Brit. Mycol. Soc.*, 4, 106 (1912).

² Buller, A. H. R., and Cameron, A. T., *Trans. Roy. Soc. Canada*, 6, Sect. 4, 73 (1912).

³ Buller, A. H. R., "Researches on Fungi", vol. 1, p. 105 (1909).

Anther and Petal Colour of Potato Varieties

WHILE anther colour has long been used as a diagnostic character in the identification of potato varieties, there is a lack of agreement in some of the published descriptions of the colours. Thus both Davidson¹ and Salaman² describe the anther colour of the variety Majestic as 'orange' and that of Arran Victory as 'pale yellow' and 'yellow, pale' respectively, which indicates some degree of agreement in their use of colour description. Nevertheless, Salaman

refers to the anther colour of Up-to-Date as 'yellow, pale', while Davidson describes it as 'orange'.

To ascertain whether the differences were due to variation in the anther colour, or to inconsistency in describing it, the colours of the anthers of several varieties from various sources, and, in the majority of cases in two or more years, were matched, after removal of the petals, against the Horticultural Colour Charts issued by the British Colour Council in collaboration with the Royal Horticultural Society in 1939 and 1942. The anther colour of some varieties was found, in fact, to exhibit a certain amount of variation although the limits of such variation were usually not wide. Its range is given in the accompanying table, the number of years over which the examinations extended being placed in parentheses after the name of the variety. The name of the colour is in each case followed by its reference number, the number in bold type being that of the full hue of which the colour given may represent a tint, shade or greyed hue.

Petal colours were determined at the same time, and these are also included in the table. Primrose yellow potato flowers are normally described as white.

ANTHER AND PETAL COLOUR OF POTATO VARIETIES.		
Variety	Anther colour	Petal colour
Arran Banner (1)	Saffron yellow 7	Primrose yellow 60 1/3
Arran Peak (2)	Saffron yellow 7	Primrose yellow 60 1/3
Arran Pilot (2)	Buttercup yellow 5 to saffron yellow 7	Mineral violet 6 35/1 to Dauphin's violet 0 39/1
Arran Victory (2)	Buttercup yellow 5 to saffron yellow 7/1	Primrose yellow 60 1/3
Ballydoon (2)	Lemon yellow 4 to buttercup yellow 5	Primrose yellow 60 1/3
British Queen (2)	Lemon yellow 4	Primrose yellow 60 1/3
Catriona (2)	Aureolin 3 to lemon yellow 4	Mauvette 5 37 to Dauphin's violet 0 39/2
Di Vernon (2)	Buttercup yellow 5/1	Spectrum violet 7 35/1 to violet 36
Doon Star (1)	Buttercup yellow 5/1	Primrose yellow 60 1/3
Duke of York (1)	Aureolin 3/1	Primrose yellow 60 1/3
Dunbar Standard (2)	Buttercup yellow 5/1 to buttercup yellow 5	Primrose yellow 60 1/3
Eclipse (1)	Empire yellow 60 3	Primrose yellow 60 1/3
Epicure (1)	Buttercup yellow 5	Primrose yellow 60 1/3
Gladstone (2)	Buttercup yellow 5 to chrome yellow 60 5	Primrose yellow 60 1/3 to primrose yellow 60 1/1
Great Scot (1)	Indian yellow 6/1	Primrose yellow 60 1/3
Kerr's Pink (3)	Lemon yellow 4 to buttercup yellow 5/1	Primrose yellow 60 1/3
Majestic (2)	Saffron yellow 7	Primrose yellow 60 1/3
Ninetyfold (1)	Aureolin 3	Primrose yellow 60 1/3
Red Skin (1)	Saffron yellow 7	Primrose yellow 60 1/3
Sharpe's Express (2)	Lemon yellow 4	Rose purple 5 33/1 to pansy violet 00 33/2
Up-to-Date (3)	Buttercup yellow 5/1 to Indian yellow 6	Mauvette 5 37 to Dauphin's violet 0 39/3

The relation between the colours in the table and those in common use is illustrated by the classification provided with volume 2 of the Horticultural Colour Charts. This shows the gradation of yellow colours from 'greenish yellow' (Dresden yellow 64—the last of the 64 full hues and therefore, on a circular arrangement of colours, adjacent to sulphur yellow 1) through 'yellow' (lemon yellow 4) and 'orange yellow' (saffron yellow 7) to 'yellowish orange' (tangerine orange 9), and of violet colours from 'reddish violet' (orchid purple 31) through 'violet' (violet 36) to 'bluish violet' (methyl violet 39).

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¹ Davidson, W. D., "Potato Growing for Seed Purposes" (Dublin: Stationery Office, 1937).

² Salaman, R. N., "Potato Varieties" (Cambridge, 1926).