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California Vascular Plants: A Numerical Conspectus

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CALIFORNIA VASCULAR PLANTS: A NUMERICAL CONSPECTUS
AS SEEN IN SIX STANDARD FLORAS

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	Lycophytes (Fern allies)	Ferns	Gymnosperms	Flowering Plants	Totals
Brewer et al.					
Families	1	10	5	117	133
Genera	2	20	14	739	775
Species	3	50	38	2733	2824
Taxa	3	59	45	3063	3170
Jepson					
Families	3	5	5	129	142
Genera	3	23	14	901	941
Species	16	63	47	3969	4095
Taxa	19	83	55	5225	5382
Abrams					
Families	2	5	5	152	164
Genera	2	22	15	1008	1047
Species	15	66	48	5131	5260
Taxa	16	70	52	6178	6316
Munz					
Families	3	9	5	145	162
Genera	3	25	15	1032	1075
Species	19	68	61	5529	5677
Taxa	20	79	64	7100	7263
Hickman					
Families	3	11	5	154	173
Genera	4	28	14	1208	1254
Species	18	85	60	5897	6060
Taxa	18	89	68	7092	7267
Baldwin					
Families	3	13	4	165	185
Genera	4	31	16	1269	1320
Species	18	93	62	6178	6351
Taxa	18	98	72	7414	7602

NOTES

We have seen a dramatic increase in the number of vascular plant families (133 ➙ 185), genera (775 ➙ 1320), species (2824 ➙ 6315), and minimum ranked taxa (subspecies and varieties) (3170 ➙ 7602) recorded in our "official" state floras, beginning with Brewer, Watson, and Gray (1880) to Hickman et al. (2012). Obviously with more than a century's of additional field work we would expect to discover previously described plants that had gone unnoticed or had been only recently introduced into California. Many newly described species, subspecies, and varieties were also found.

But there are other explanations. In a number of instances, research concluded that what had been seen earlier as a single species, perhaps occurring in two disjunct regions in the state, is better treated as two species; or in other instances well marked morphological differences in a species support recognizing two or more varieties.

The authors of floras must also have criteria for including and excluding plants. Clearly a flora should account for all of the native plants. But what if some of them have not been collected for several decades and are presumably extinct? Is a plant known only from the single collection upon which it was originally described (the type specimen) really a component of our flora? A flora should deal with plants that have been purposely introduced as crops and ornamentals – but only when they have escaped from our agricultural fields and gardens? How about weeds? How many occurrences are needed to say that a plant is naturalized and is persisting without human assistance? Most of us would not consider an opium poppy growing in someone's garden as part of the local flora. But what if that opium poppy is growing in the garden of a farm house abandoned decades ago – back when it was legal to grow them – and all that remains is a foundation, a chimney, and what was once a garden?

My numbers are higher because I tend to be more inclusive in these various options.

SOURCES

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