

# The Garden Route in flames: Chapter VIII - Using photoseries for prescribed burning and wildfire assessment

A book by Dr Neels de Ronde

The following article is the eight chapter in the series of excerpts from a book written by Dr Neels de Ronde, The Garden Route in flames. Dr De Ronde lived in the Southern Cape in South Africa and had done extensive research in the field of land management and wildfire prevention. Dr De Ronde gave permission to Fire and Rescue International to publish his book in the magazine in separate sections for the benefit of all forestry and wildfire managers, fire protection associations and land owners in order to gain insight and an understanding of the intricacies that form the basis of such extreme fires and how it can be prevented, highlighting effective fuel management and fire prevention measures.

## Using photoseries for prescribed burning and wildfire assessment

Regional photoseries should be developed from each representative fuel model included in a regional-specific custom fuel model set developed for a region. Custom fuel model sets should preferably have a total number of 8 – 15 representative regional fuel models, which should form the bases for all purposes as set out in pars. 2.1 to 2.5. Individual fuel



**Photograph 28: Mature Arbustos shrubland in northern Portugal (unknown photographer)**

models will then be developed and tested with the BehavePlus 2-D fire behaviour prediction program (Andrews, 1986 and other).

A typical example of a multiple fuel model in a fuel model set can be illustrated as is shown on the next page below. Note first of all the basic Photograph with measuring stick to provide fuel depth perspectives. Also note that there are four boxes in which specific information has been provided, namely: (i) overstorey characteristics, (ii) fuel loading (tons/ha), (iii) understorey/

fuel characteristics and average percentage cover, and (iv) fire behaviour under specific prescribed burning conditions.

The examples on the next pages are one Photograph of the vegetation illustration with a measuring stick, here shown is Tsitsikamma Fynbos, similar to what should be developed with photoseries for the mountains in the Outeniqua Mountains, Arbustos shrubland in Portugal (Photograph 28) and an example of a full photoseries picture has been provided under Photograph 29. ▲



**Photograph 29: Example of Photoseries with vegetation, fuel and fire behaviour characteristics with output for prescribed burning and wildfire conditions, courtesy York Timbers (Pty) Ltd**