
Contents

Introduction

Section 1:

Introductory papers

- Ecological settings for the emergence of agriculture *J R Harlan* 3
Changing patterns of land use: global trends *A H Bunting* 23
Changing patterns of land use in England and Wales *A B Trask* 39

Section 2:

Plant pathogenic viruses, bacteria and fungi

- The role of weeds and wild plants in the epidemiology of plant virus diseases *J M Thresh* 53
The role of wild hosts in cocoa swollen shoot disease *A F Posnette* 71
The possible role of amenity trees and shrubs as virus reservoirs in the United Kingdom *J I Cooper* 79
The ecology of viruses infecting wild and cultivated potatoes in the Andean region of South America *R A C Jones* 89
Wild plants in the ecology of hopper-borne viruses of grasses and cereals *M Conti* 109
Hawthorn as a source of the fireblight bacterium for pear, apple and ornamental hosts *E Billing* 121
The ecology of plant parasitic fungi *B E J Wheeler* 131
Epidemics caused by fungal pathogens in wild and crop plants *A Dinoor* 143
The agroecosystem–natural ecosystem dichotomy and its impact on phytopathological concepts *J A Browning* 159

Section 3:

Soil-borne fungi, nematodes and nematode-borne viruses

- Soil-borne fungal pathogens in natural vegetation and weeds of cultivation *G W F Sewell* 175
The role of grasses in the ecology of take-all fungi *J W Deacon* 191
Role of wild plants and weeds in the ecology of plant-parasitic nematodes *D J Hooper and A R Stone* 199

iv Contents

- The effects of weeds and wild plants on the reinfestation of land by
Ditylenchus dipsaci (stem and bulb nematode) and on the stability of
its populations *C D Green* 217
- The distribution of virus-vector nematodes in Great Britain in relation to past
and present natural vegetation *D G McNamara and J J M Flegg* 225
- The role of wild plants in the ecology of nematode-borne viruses
A F Murant 237

Section 4:

Arthropod pests

- Wild plants in the ecology of insect pests *H F van Emden* 251
- The distribution of carrot fly (*Psila rosae*) in relation to the flora of
field boundaries *D Wainhouse and T H Coaker* 263
- Windbreaks as a source of orchard pests and predators *M G Solomon* 273
- The wild hosts of aphid pests *V F Eastop* 285
- Wild grasses and the grain aphid (*Sitobion avenae*) *A D Watt* 299
- The overwintering of the rose-grain aphid (*Metopolophium dirhodum*)
on wild roses *S C Hand and C T Williams* 307
- The interaction of wild vegetation and crops in leaf-cutting ant attack
J M Cherrett 315
- Wild plants in the ecology of the Desert Locust *R C Rainey* 327

Section 5:

Vertebrate pests

- The role of wild plants in the ecology of mammalian crop pests
L M Gosling 341
- Crop damage by birds *J J M Flegg* 365
- Seeds, buds and bullfinches *N J Matthews and J J M Flegg* 375
- Bullfinch (*Pyrrhula pyrrhula*) damage in orchards in relation to woodland
bud and seed feeding *D D B Summers* 385
- The relevance of 'natural' habitats to starling damage *C J Feare* 393

Section 6:

The impact of weeds and weed control practices on crop pests and diseases

- Weed control practices and changing weed problems *J D Fryer* 403
- The effects of weeds and weed control on temperate fruit orchards and
their environment *D Atkinson and G C White* 415
- Herbicide management in apple orchards and the fruit rot caused by
Phytophthora syringae *D C Harris* 429
- Effects of weed grasses on the ecology and distribution of ergot
(*Claviceps purpurea*) *P G Mantle* 437
- Effects of weeds and weed control on invertebrate pest ecology
M J Way and M E Cammell 443

- Crop–weed–insect interactions and the development of pest-stable cropping systems *M A Altieri* 459
- Weed hosts of aphid-borne viruses of vegetable crops in Florida
W C Adlerz 467
- Interrelationships between wild host plant and aphid vector in the epidemiology of lettuce necrotic yellows
D K Martin and J W Randles 479

Section 7:

Commentary *F T Last* 489

Subject index 503

Nematodes 503

Arthropods: mites and insects 504

Birds 506

Mammals 507

Viruses, virus and virus-like diseases 508

Bacteria, fungi and fungal diseases 509

Plants 510