



The Nature of Irish Hedgerows.

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Structure of presentation:

Hedges:

- **Their value**
- **Quantity**
- **Quality**
- **Management**

The Secret Life of Irish Hedges

<https://teagasc.ie/media/website/publications/2020/Environment---The-secret-life-of-hedges.pdf>

❖ Birds

- Of 110 birds - 55 use hedges (35 to nest)

❖ Mammals

- Hedgehog, shrew, pine marten

❖ Bats

- 9 species

❖ Bees

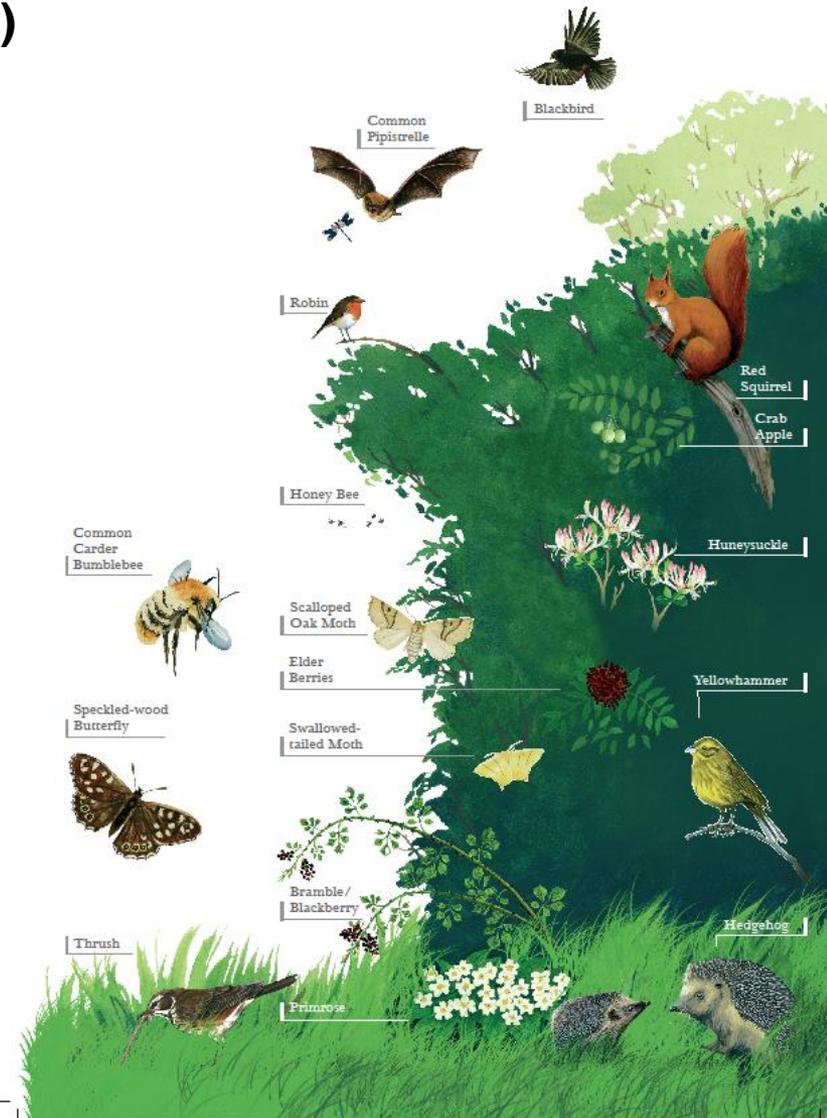
- 77 solitary bees
- 21 bumble bees
- 1 honey bee

❖ Moths

- Over 1400 species

❖ Butterflies

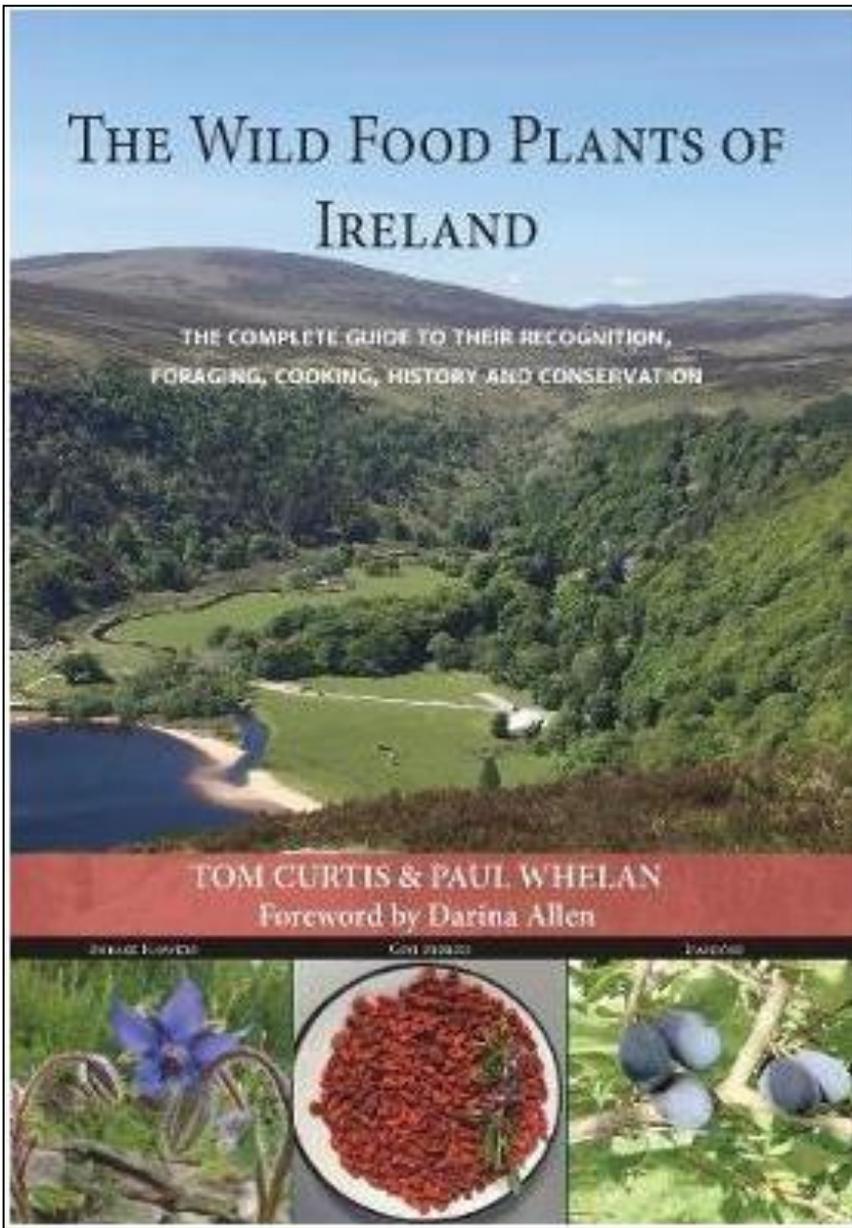
- 35 species



Food for Free from Hedges

119 native Irish flora have historically been used for food in Ireland
(Wyse Jackson, 2014)





Hedges are a store of Carbon

- ❖ **Hedges potentially sequester 0.5 – 2.7 t CO₂ / ha / year**
(Black et al., 2014)
- ❖ **Farm-Carbon project**
 - led by Teagasc Environment, Soils and Land Use Department in Johnstown Castle
 - Aims to develop a growth model taking direct measurements of hedge biomass, along with assessing the impact of management on hedgerow biomass accumulation.



Heavily managed



Unmanaged

Hedges protect watercourses

- ❖ Hedgerows are microtopographic features that block runoff and entrained/dissolved pollutants from reaching the water body (I.A. Thomas et al., 2016)



Hedges provide shelter



Good for animal welfare

Hedges are integral part of the Irish landscape

- Hedges and fields are complimentary – one defines the other
- Give character to a landscape



Hedges are part of our cultural heritage

❖ Ancient history

- Archaeology
- Townland boundaries

❖ Local heritage

- Give identity to townlands and farms
- Sense of place

Kickham Tree Project



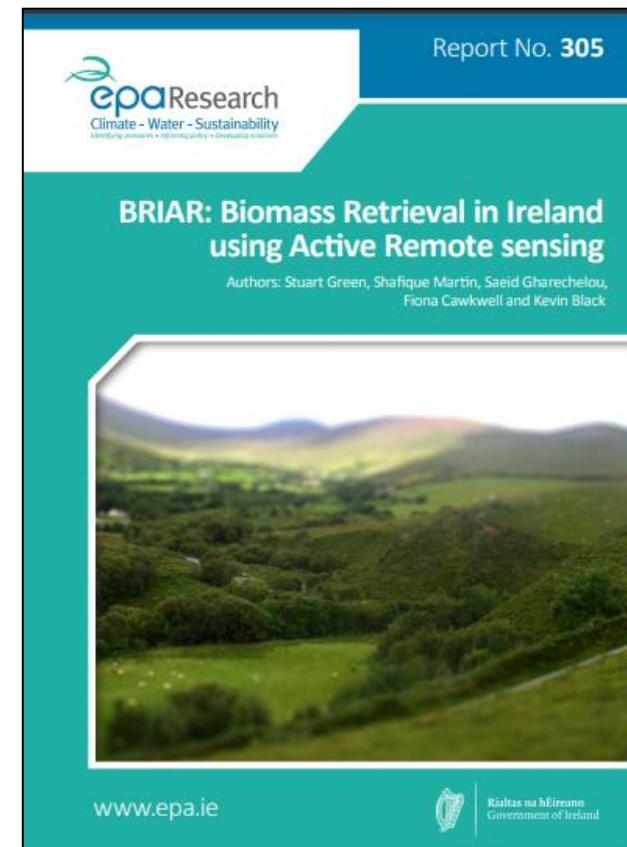
❖ Undervaluation of 'common' habitats - *An rud is anamh is iontach*

Quantity

❖ 689,000 kms of non-Dry Stone Wall boundaries

(Green, S et al., 2019)

County	Total	Unshared	Shared	Internal
Clare	33	19 (58)	5 (15)	9 (27)
Cork	88	50 (57)	13 (15)	25 (28)
Carman	30	17 (57)	4 (13)	9 (30)
Carlow	10	5 (50)	2 (20)	3 (30)
Dublin	5	3 (60)	1 (20)	1 (20)
Donegal	32	19 (59)	5 (16)	8 (25)
Galway	39	23 (59)	7 (18)	9 (23)
Kildare	16	10 (63)	2 (13)	4 (25)
Kilkenny	26	13 (50)	5 (19)	8 (31)
Kerry	38	23 (61)	6 (16)	10 (26)
Longford	14	8 (57)	2 (14)	4 (29)
Louth	9	6 (67)	2 (22)	2 (22)
Limerick	35	21 (60)	5 (14)	9 (26)
Leitrim	21	11 (52)	3 (14)	7 (33)
Lecce	18	11 (61)	3 (17)	4 (22)
Meath	20	16 (80)	4 (20)	0 (0)
Monaghan	22	12 (55)	4 (18)	6 (27)
Mayo	35	22 (63)	5 (14)	7 (20)
Offaly	19	13 (68)	3 (16)	4 (21)
Roscommon	20	15 (75)	4 (20)	0 (0)
Sligo	10	11 (110)	3 (30)	0 (0)
Tipperary	48	27 (56)	8 (17)	13 (27)
Waterford	17	10 (59)	2 (12)	5 (29)
Westmeath	20	13 (65)	3 (15)	4 (20)
Wicklow	14	8 (57)	2 (14)	4 (29)
Wexford	29	16 (55)	5 (17)	7 (24)
Total kms	689,000	406,000	106,000	177,000



Occurrences of the types of boundary in the LUCAS 2015 dataset (Green, S et al., 2019)



Managed hedges



Unmanaged hedges



Dry stone walls

Quantity: Removal

EIA (Agriculture) Regulations 2011

Category of activity	Threshold for:	
	EIA screening	consent and mandatory EIA
1. Re-structuring of rural land holdings:		
Length of field boundary to be removed	500 m	4 km
OR Area of lands to be restructured by removal of field boundaries	5 ha	50 ha

EIA Screening Applications for Field Boundary Removal	
Year	% Approved
2019	88
2018	89
2011 - 2017	94

<https://www.agriculture.gov.ie/ruralenvironmentsustainability/environmentalimpactassessment/>

Landscape Features under Cross Compliance

❖ Since 2009:

- Hedges and Drains cannot be removed / piped and closed in ...unless a replacement hedge / drain of similar length is planted / dug at a suitable location on the holding in advance of the removal of the existing hedgerow / drain.

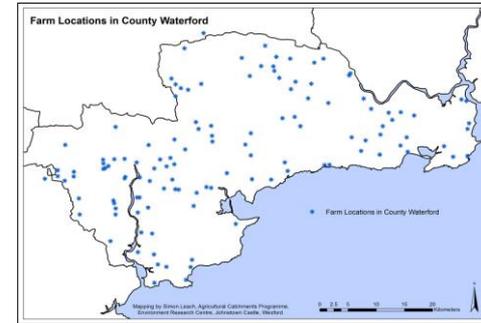
GAEC 7 - Retention of landscape features, ban on cutting hedges & trees in bird nesting season & encroachment of invasive species

7A	Is there evidence of the damage/removal of designated Landscape Features?		
7B	Is there evidence of the cutting of hedges and/or trees during the bird nesting and breeding season (1 March - 31 August)?		
7C	Is applicant failing to take appropriate measures to prevent the encroachment/proliferation of invasive/noxious species on to land?		

<https://www.agriculture.gov.ie/farmerschemespayments/crosscompliance/landscapefeatures/>

Quantity

- ❖ **Average Field Size per farm**
- ❖ **PhD Study: 149 dairy farms in County Waterford**
 - **Av Field size per farm: 5.15 ha**
 - **Range of Av Field Size: 1.17 ha – 37.25 ha**



Study Finding

Farmer Preference for farming platform structure



Study Finding: Role of Contractors

85% of farmers used contractors for hedge cutting

... of whom 49% left the decision to the contractor on how to cut



❖ Tidiness was important to farmers in the study

- The quest for neatness should not override ecological considerations

Study Finding: Role of Knowledge Exchange

- ❖ **Farmers sourced environmental information from their traditional sources for agricultural information**
 - **The network of agricultural advisors are key to improve hedgerow management.**



❖ Flora in the hedge

- Age of hedge
- Variety of species
- Native species



Invertebrates associated with Tree species	
Willows	266
Oaks	284
Birch	229
Whitethorn	209 (UK figure)
Sycamore (non-native)	43
Horse Chestnut (non-native)	9

Source: Feehan, J., 2003

Quality Native hedge species: Thorn



Whitethorn



Holly



Blackthorn

Quality

Native hedge species



Guelder Rose



Spindle



Privet



Hazel



Bramble / Blackberry



Woodbine / Honeysuckle



Quality: Farming platform structure

- ❖ **Linear habitats**
 - **Greater edge: area ratio**
- ❖ **Networks for nature / Corridors of movement**
- ❖ **T-junctions and Intersections**



**Individual length of hedge with
dead ends**



Corridor Network



**Mosaic of hedges linking
habitats**

Quality: Hedge structure

Hedge Height

At least 1.5 m high

- for birds to nest
- to have cover over and under the nest



60% had hedgerows > 1.5 m

Quality: Hedge structure

❖ Thorn trees

- flowers for bees
- fruit for birds and small mammals

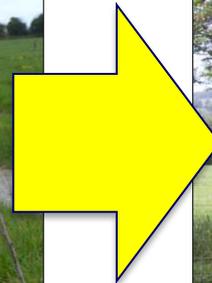


**81% retained saplings
but only 22% retained
a whitethorn tree**

Hedge management: depends on hedge type



- ❖ Hedges are man-made and need management
- ❖ Must work with apical dominance



I. Dense base



➤ Side-trim to a triangular profile from a wide base, leaving peak as high as possible with occasional trees (including thorns) at irregular intervals



II. Relict

➤ Leave alone



III. Escaped

➤ Can rejuvenate

Management for 3 Hedge Types

Management

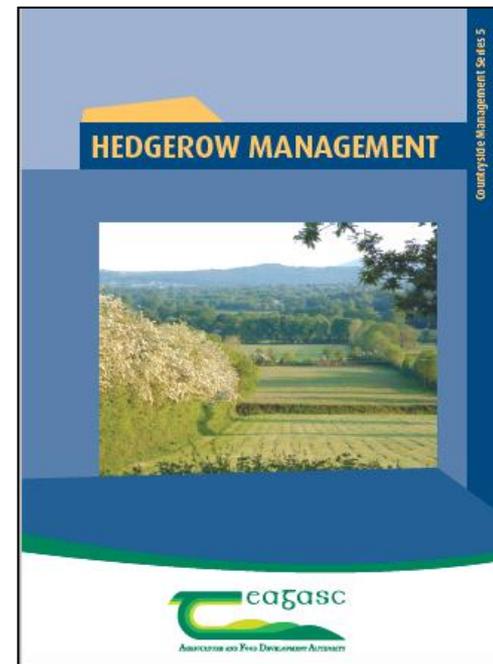
Inappropriate management

- Toilet brush hedges
- Neither a hedge or a tree



Management

- ❖ A variety of hedge types on a farm is recommended



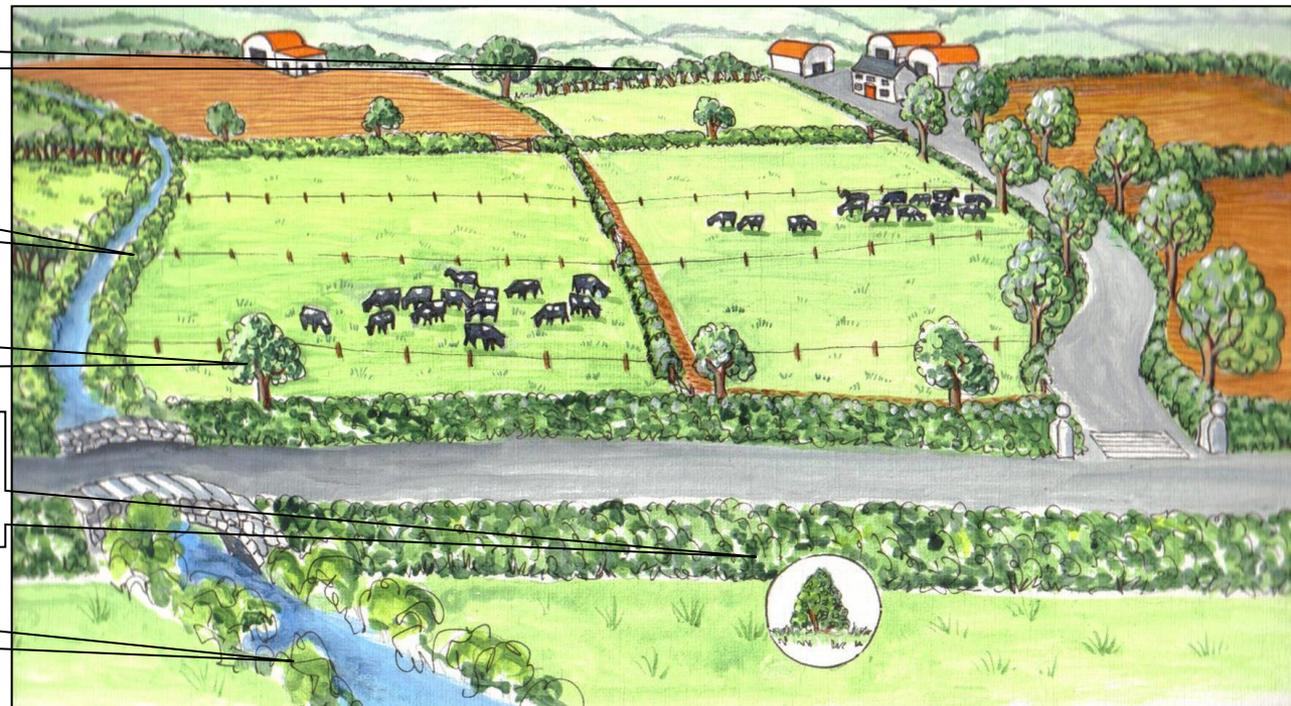
Relict hedgerows

New hedges

Thorn Trees retained

Tall, triangular profile hedges with dense base

Escaped hedges



Go raibh maith agaibh