

Appendix 1: Supplementary tables

Appendix 1 for: Zinnen J, Charles B, Wilhelm C, Matthews JW (2024) Wetland portrayal in modern films. *Wetlands*

Table S1: 30 terms used to extract wetland films from plot summaries and the counts of 160 films that had those terms. Note that 3 films were not included in the calculations shown below because they were opportunistically sampled.

Term	Frequency
Amazon R*	4
bayou*	20
billabong*	2
bog*	18
delta*	3
estuar*	1
fen*	0
floodplain*	0
glade*	8
lowland*	1
mangrove*	4
marsh*	23
Mekong*	1
mire*	2
moor*	4
morass*	0
muck*	0
muskeg*	0
Okavango*	1
Pantanal*	0
playa*	0
pocosin*	0
quicksand*	13
rice padd*	1
slough*	1
Sundarbans*	0
swale*	0
swamp*	79
tundra*	1
wetland*	1

Table S2: A list of all 163 modern (post-1979) films used in the study. Films are organized by year.

Film name	Year of release	Genre/s	MPAA Rating
<i>Atlantic City</i>	1980	Crime, Drama	R
<i>Star Wars: Episode V - The Empire Strikes Back</i>	1980	Action, Epic, Fantasy, Science Fiction	PG
<i>An American Werewolf in London</i>	1981	Comedy, Horror, Monster film	R
<i>Porky's</i>	1981	Comedy	R
<i>Quest for Fire</i>	1981	Adventure, Historical	R
<i>Southern Comfort</i>	1981	Action, Thriller	R
<i>The Beyond</i>	1981	Horror	NR
<i>Swamp Thing</i>	1982	Action, Adventure, Science Fiction	PG
<i>The Beast Within</i>	1982	Horror, Mystery, Monster film	R
<i>Krull</i>	1983	Fantasy	PG
<i>The Treasure of the Four Crowns</i>	1983	Action, Adventure	PG
<i>Birdy</i>	1984	Drama, War	R
<i>Nausicaa of the Valley of the Wind</i>	1984	Animation/anime, Fantasy	PG
<i>Romancing the Stone</i>	1984	Action, Adventure, Comedy, Romance	PG
<i>Supergirl</i>	1984	Action, Adventure, Science Fiction	PG
<i>Tank</i>	1984	Action, Drama	PG
<i>The NeverEnding Story</i>	1984	Fantasy	PG
<i>Come and See</i>	1985	War	NR
<i>Invasion U.S.A.</i>	1985	Action	R
<i>King Solomon's Mines</i>	1985	Action, Adventure	PG-13
<i>Legend</i>	1985	Fantasy	PG
<i>Stick</i>	1985	Action, Crime	R
<i>The Black Cauldron</i>	1985	Adventure, Animation/anime, Fantasy	PG
<i>Transylvania 6-5000</i>	1985	Horror, Comedy	PG
<i>Band of the Hand</i>	1986	Action, Crime, Drama, Thriller	R
<i>Crocodile Dundee</i>	1986	Action, Comedy	PG-13
<i>Down by Law</i>	1986	Comedy, Crime, Drama	R
<i>Labyrinth</i>	1986	Adventure, Fantasy, Musical	PG

<i>Mella Thirandhathu Kadhavu</i>	1986	Drama, Musical, Romance	NR
<i>No Mercy</i>	1986	Thriller	R
<i>Stand by Me</i>	1986	Drama	R
<i>The Adventures of Milo and Otis</i>	1986	Comedy	G
<i>Dragon Ball: Sleeping Princess in Devil's Castle</i>	1987	Action, Adventure, Animation/anime, Fantasy	NR
<i>Empire of the Sun</i>	1987	War	PG
<i>Project X</i>	1987	Drama	PG
<i>Shy People</i>	1987	Drama	R
<i>Sister, Sister</i>	1987	Horror, Thriller	R
<i>The Brave Little Toaster</i>	1987	Adventure	G
<i>The Princess Bride</i>	1987	Adventure, Comedy, Fantasy	PG-13
<i>Crusoe</i>	1988	Drama	PG-13
<i>Felix the Cat: The Movie</i>	1988	Fantasy	G
<i>Gator Bait II: Cajun Justice</i>	1988	Action	R
<i>Mississippi Burning</i>	1988	Drama, Mystery	R
<i>Police Academy 5: Assignment Miami Beach</i>	1988	Comedy	PG
<i>Pound Puppies and the Legend of Big Paw</i>	1988	Adventure, Animation/anime, Musical	G
<i>Cyborg</i>	1989	Action, Science Fiction	R
<i>Fall of the House of Usher</i>	1989	Horror	R
<i>Hell High</i>	1989	Horror	R
<i>Henry V</i>	1989	Drama	PG-13
<i>Troop Beverly Hills</i>	1989	Comedy	PG
<i>Jacob's Ladder</i>	1990	Horror, War	R
<i>Leatherface: The Texas Chainsaw Massacre III</i>	1990	Horror	R
<i>At Play in the Fields of the Lord</i>	1991	Adventure, Drama, Epic	R
<i>Paradise</i>	1991	Drama	PG-13
<i>Zandalee</i>	1991	Romance, Thriller	R
<i>Freddie as F.R.O.7</i>	1992	Action, Animation/anime, Fantasy, Musical	PG
<i>Bedevil</i>	1993	Experimental	NR
<i>Hard Target</i>	1993	Action	R
<i>The Pelican Brief</i>	1993	Thriller	PG-13

<i>Forrest Gump</i>	1994	Comedy, Drama, Epic	PG-13
<i>Interview with the Vampire</i>	1994	Horror, Monster film	R
<i>Jason's Lyric</i>	1994	Epic, Romance	R
<i>Raw Justice</i>	1994	Action, Thriller	R
<i>The Jungle Book</i>	1994	Action, Adventure	PG
<i>Cutthroat Island</i>	1995	Action, Adventure	PG-13
<i>The Walking Dead</i>	1995	Action, Drama, War	R
<i>Fly Away Home</i>	1996	Drama, Family	PG
<i>Heaven's Prisoners</i>	1996	Crime, Drama, Mystery, Thriller	R
<i>Ridicule</i>	1996	Drama, Historical	R
<i>Sleepers</i>	1996	Crime, Drama	R
<i>Anaconda</i>	1997	Horror, Thriller, Monster film	PG-13
<i>Eve's Bayou</i>	1997	Drama	R
<i>For Richer or Poorer</i>	1997	Comedy	PG-13
<i>Gone Fishin'</i>	1997	Comedy	PG
<i>I Know What You Did Last Summer</i>	1997	Horror, Mystery	R
<i>I Went Down</i>	1997	Crime	R
<i>Swan Princess 2: Escape from Castle Mountain</i>	1997	Animation/anime	G
<i>The Apostle</i>	1997	Drama	PG-13
<i>Wild America</i>	1997	Adventure	PG
<i>Psycho</i>	1998	Horror	R
<i>Wild Things</i>	1998	Crime, Mystery, Thriller	R
<i>A Midsummer Night's Dream</i>	1999	Comedy, Fantasy, Romance	PG-13
<i>With Fire and Sword</i>	1999	Drama, Epic, Historical, War	NR
<i>Dracula 2000</i>	2000	Fantasy, Horror	R
<i>Mission Kashmir</i>	2000	Thriller	R
<i>The Patriot</i>	2000	Action, Epic, Historical	R
<i>Bully</i>	2001	Drama, Thriller	R
<i>Chiranjeevulu</i>	2001	Action, Comedy	NR
<i>Pearl Harbor</i>	2001	Drama, Epic, Romance, War	PG-13
<i>Shrek</i>	2001	Animation/anime, Comedy, Fantasy	PG

<i>Spirited Away</i>	2001	Animation/anime, Fantasy	PG
<i>Adaptation</i>	2002	Comedy, Drama	R
<i>Collateral Damage</i>	2002	Action	R
<i>The Lord of the Rings: The Two Towers</i>	2002	Adventure, Epic, Fantasy	PG-13
<i>Tuck Everlasting</i>	2002	Fantasy, Romance	PG
<i>Bad Boys II</i>	2003	Action, Comedy	R
<i>Big Fish</i>	2003	Comedy, Drama, Fantasy	PG-13
<i>Darna Mana Hai</i>	2003	Horror	NR
<i>Rugrats Go Wild</i>	2003	Adventure, Animation/anime, Musical	PG
<i>The Haunted Mansion</i>	2003	Fantasy, Horror	PG
<i>The Snow Walker</i>	2003	Drama	PG
<i>Calvaire</i>	2004	Horror	NR
<i>Scooby Doo 2: Monsters Unleashed</i>	2004	Mystery	PG
<i>Duma</i>	2005	Adventure	PG
<i>King Kong</i>	2005	Action, Adventure, Epic, Fantasy, Monster film	PG-13
<i>Man-Thing</i>	2005	Horror	R
<i>The Ballad of Jack and Rose</i>	2005	Drama	R
<i>The New World</i>	2005	Drama, Historical, Romance	PG-13
<i>The Skeleton Key</i>	2005	Horror	R
<i>Venom</i>	2005	Horror	R
<i>Déjà Vu</i>	2006	Action, Science Fiction, Thriller	PG-13
<i>Hatchet</i>	2006	Horror, Monster film	R
<i>Tales from Earthsea</i>	2006	Fantasy	PG-13
<i>That Beautiful Somewhere</i>	2006	Drama, Mystery	R
<i>The Marine</i>	2006	Action, Thriller	PG-13
<i>Fear(s) of the Dark</i>	2007	Animation/anime, Horror	NR
<i>Primeval</i>	2007	Action, Adventure, Horror	R
<i>Spiderman 3</i>	2007	Adventure, Science Fiction, Superhero	PG-13
<i>Defiance</i>	2008	Drama, War	R
<i>Gomorrah</i>	2008	Crime, Drama	NR
<i>Killshot</i>	2008	Crime, Drama, Thriller	R

<i>Rambo</i>	2008	Action, Thriller, War	R
<i>The Spirit</i>	2008	Superhero	PG-13
<i>Harry Potter and the Half-Blood Prince</i>	2009	Fantasy	PG
<i>In the Electric Mist</i>	2009	Mystery	R
<i>Peranmai</i>	2009	Action, Adventure, Musical	NR
<i>Taras Bulba</i>	2009	Drama, Epic, Historical	NR
<i>The Lovely Bones</i>	2009	Drama, Mystery	PG-13
<i>The Princess and the Frog</i>	2009	Animation/anime, Fantasy, Musical	G
<i>Black Death</i>	2010	Horror	R
<i>The Paperboy</i>	2010	Crime, Drama, Mystery	R
<i>Daisy, A Hen into the Wild</i>	2011	Animation/anime	NR
<i>Jane Eyre</i>	2011	Drama	PG-13
<i>Keyhole</i>	2011	Drama, Fantasy, Thriller	R
<i>Pirates of the Caribbean: On Stranger Tides</i>	2011	Action, Adventure, Fantasy	PG-13
<i>Shark Night 3D</i>	2011	Horror, Monster film	R
<i>Straw Dogs</i>	2011	Action, Thriller	R
<i>Wicker Tree</i>	2011	Thriller	R
<i>Beasts of the Southern Wild</i>	2012	Drama, Fantasy	PG-13
<i>Poklosie</i>	2012	Drama	NR
<i>The Outback (aka Koala Kid)</i>	2012	Adventure, Animation/anime	PG
<i>The Woman in Black</i>	2012	Horror	PG-13
<i>Transit</i>	2012	Thriller	R
<i>12 Years a Slave</i>	2013	Drama, Historical	R
<i>Evil Dead</i>	2013	Horror	R
<i>In Fear</i>	2013	Horror, Thriller	R
<i>Pain and Gain</i>	2013	Action, Crime	R
<i>Hercules</i>	2014	Action, Adventure, Fantasy	PG-13
<i>Into the Woods</i>	2014	Adventure, Fantasy, Musical	PG
<i>Iyobinte Pusthakam</i>	2014	Action, Drama, Historical, Musical, Romance, Thriller	NR
<i>Jessabelle</i>	2014	Horror	PG-13
<i>Maleficent</i>	2014	Fantasy	PG

<i>Ribbit</i>	2014	Adventure, Animation/anime, Comedy	PG
<i>When Marnie Was There</i>	2014	Animation/anime	PG
<i>Mad Max: Fury Road</i>	2015	Action	R
<i>Muck</i>	2015	Horror	NR
<i>Schneider vs. Bax</i>	2015	Comedy, Thriller	NR
<i>Free State of Jones</i>	2016	Drama, Historical	R
<i>Midnight Special</i>	2016	Science Fiction, Thriller	PG-13
<i>Beatriz at Dinner</i>	2017	Drama	R
<i>Jungle</i>	2017	Adventure, Drama	R
<i>King Arthur: Legend of the Sword</i>	2017	Action, Adventure, Fantasy	PG-13
<i>The Pilgrim's Progress</i>	2019	Adventure	PG

Table S3: Information on 64 tags used to describe wetland portrayals in 163 films. Axis 1 and Axis 2 scores represent the relative strength of those tag's contributions to the principal coordinates analysis shown in the main document. Generally, extracting 'loadings' from PCoA axes is not straightforward, but we used the code provided by Grenié (2018) to approximate the strength of the relationship between the tags to the axes.

Tags	Axis 1 score	Axis 2 score	Frequency	Percent
Adventure	0.262	-1.043	60	36.8
Bathing beauty	0.260	0.034	15	9.2
Betrayal	-0.562	0.510	38	23.3
Boat troubles	-0.059	0.214	14	8.6
Chase follow	-0.892	-0.473	71	43.6
Comedic device/slapstick humor	0.345	-0.134	14	8.6
Community/camaraderie/teamwork	0.779	0.508	28	17.2
Consumed by creature	-0.503	-0.154	32	19.6
Corpse	-1.443	1.364	59	36.2
Crime scene/villain hideout	-0.693	0.934	37	22.7
Culturally distinct inhabitants	0.579	0.628	27	16.6
Damsel in distress	-0.199	-0.152	25	15.3
Danger/conflict	-1.305	-0.393	117	71.8
Darkness	-1.169	0.226	69	42.3
Death	-1.556	1.099	88	54
Desperation	-0.905	-0.361	71	43.6
Destination	0.324	0.491	39	23.9
Destiny	0.294	0.375	22	13.5
Discomfort/disease/misery	-0.077	0.227	23	14.1
Drowning	-0.614	-0.273	42	25.8
Environmental conservation	0.217	0.100	10	6.1
Escape/refuge	0.703	0.145	68	41.7
Flood	0.039	-0.017	2	1.2
Fog/miasma	-0.763	0.447	50	30.7
Food and resources	0.907	1.104	48	29.4
Foresight	0.056	0.106	5	3.1
Friendship	1.159	0.270	42	25.8
Graveyard/cemetery	-0.224	0.134	9	5.5
Heroes/allies	0.775	0.223	59	36.2
Hindrance to development/society	0.176	0.120	6	3.7
Home	0.620	0.771	32	19.6
Joy	0.687	0.455	20	12.3
Lost/stranded	0.004	-0.255	26	16
Love/romance	0.345	0.263	30	18.4
Low class/humble living	0.140	0.727	28	17.2
Malicious trespassing/poaching	-0.068	0.311	10	6.1

Mercy	0.094	0.150	7	4.3
Monster/creatures	-0.552	-1.031	57	35
Mud/filth	-0.742	-0.373	57	35
Murder	-1.294	1.633	56	34.4
Obstacle	-0.825	-1.121	69	42.3
Outcast	0.186	0.674	32	19.6
Pain or loss	-0.238	1.406	54	33.1
Play/sports/recreation	0.472	0.448	21	12.9
Poisoned/contaminated	-0.015	-0.024	5	3.1
Quagmire/sinking/quicksand	-0.583	-0.677	44	27
Racism/slavery	0.018	0.196	9	5.5
Religious ceremony/baptism/funeral	0.449	0.287	15	9.2
Rest/respice	0.246	0.089	13	8
Revelation/wisdom/knowledge	0.495	0.642	38	23.3
Revenge	-0.577	0.525	25	15.3
Royalty/kingdom	0.022	-0.012	4	2.5
Rustic wetland shack/abode	0.280	0.612	30	18.4
Sexual assault	-0.186	0.258	9	5.5
Shortcut	-0.019	0.046	8	4.9
Stench/odor	-0.100	-0.036	9	5.5
Suicide	-0.020	0.141	7	4.3
Supernatural	-0.035	-0.342	53	32.5
Treasure/sought object/MacGuffin	-0.107	-0.024	24	14.7
Trial/test planned by powerful character	-0.094	0.264	16	9.8
Villains/unsavory characters	-1.315	0.176	87	53.4
Violence	-1.188	1.600	78	47.9
Voodoo/magic	0.001	0.028	6	3.7
War/battle	-0.471	0.42	26	16

References

Grenié M (2018) Plotting arrows on a PCoA.
<https://gist.github.com/Rekyt/ee15330639f8719d87aebdb8a5b095d4>