# Pulmonic ingressive speech in the Shetland Isles: Some observations on a potential Nordic relic feature

Peter Sundkvist, Stockholm University, Department of English

#### Abstract

This paper provides a commentary on and discussion of pulmonic ingressive speech in the Shetland Isles. The aim is to contribute towards a further understanding of the current distribution of ingressive speech in the Shetland community and some of the situational factors governing its usage. Observations are also discussed which may provide clues to the mechanisms for and constraints on the transference of ingressives and may therefore be relevant for establishing the origin of ingressives in Shetland. The observations discussed were made by the author in Shetland and Sweden and by previous researchers in Norway, the USA and elsewhere.

#### 1. Introduction

Pulmonic ingressive speech is defined on the basis of its initiation, or airstream mechanism<sup>1</sup>. In order to produce an audible speech sound some form of initiation is required, which sets up an airflow somewhere in the vocal tract (Catford 1988). For pulmonic ingressive speech, the airstream is achieved by drawing air into the lungs (hence the terms 'pulmonic' and 'ingressive'), in contrast to the more commonly used pulmonic egressive (outward) airstream.

Pulmonic ingressive speech is a feature which will be familiar to readers from the Nordic countries, and possibly northern Europe more generally. It commonly occurs in Swedish, Norwegian, Danish, and Finnish, and has also been reported for Faroese, Icelandic, German, Austrian, Dutch, Estonian, and Latvian (Pitschmann 1987; Clarke & Melchers 2005). It typically occurs on discourse particles representing 'yes' and 'no' responses, given as feedback within a conversation. The example in (1), from the Göteborg Spoken Language Corpus, cited in

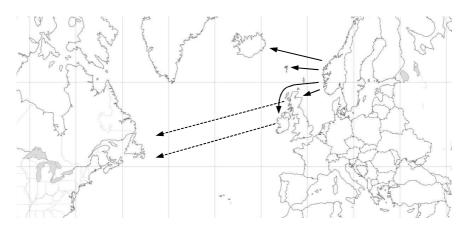
<sup>&</sup>lt;sup>1</sup>Although it is sometimes loosely referred to as "ingressive articulation" (Clarke & Melchers 2005: 51) or "ingressive phonation" (Eklund 2008: 235), it is in fact an airstream mechanism or form of initiation. It also follows from this that ingressives may in principle be either voiced or voiceless, that is, produced with or without vocal fold vibration.

Clarke & Melchers (2005: 52), illustrates a typical occurrence in Swedish:

(1)	Speaker 1: ja(g) tror de		'I think so'
	Speaker 2: ja de e dom		'Yes, they are'
	Speaker 1: ja (ingressive)	'Yes'	

What is less well known, however, is the fact that it also occurs in various regional forms of English. Its existence is well documented in Maritime Canada and coastal New England (Peters 1981; Steinbergs 1993; Shorrocks 2003; Clarke & Melchers 2005). Although the documentation is substantially weaker, it may also be found in the British Isles, including Scotland, Ireland, Wales, and some parts of Northern England (Peters 1981; Clarke & Melchers 2005; Shorrocks 2003).

Assuming that pulmonic ingressive speech is restricted to, or at least particularly common in, these locations, its regional distribution lends itself to a contact-based explanation. Clarke and Melchers (2005) put forward the idea that ingressive speech was transmitted from Scandinavia to Britain and Ireland via Viking settlers and invaders, and at a later stage was further transported to North America by British and Irish migrants (see Figure 1). Furthermore, several parallels are reportedly to be found regarding the usage of ingressive speech within this North Atlantic/Baltic Zone: it occurs on brief discourse particles for 'yes' and 'no', it signals a level of affiliation or intimacy between interlocutors, and it is supposedly used more frequently by women (Clarke & Melchers 2005). In Clarke and Melchers' view, this provides further support for the idea that ingressive speech constitutes the 'same' phenomenon throughout this region and for the transmission hypothesis.



*Figure 1*. Westward spread of ingressives within the North Atlantic/Baltic Zone (based on Clarke & Melchers 2005)

Solid lines: first wave of spread (by Vikings); dashed lines: second wave(s) of spread (by British and Irish migrants)

More recent research, however, presents a more complex picture. While not denying that ingressives seem to be particularly common within the North Atlantic Zone, Eklund (2008) provides an extensive survey of documented and reported occurrences of ingressives across the world. The results suggest that they are more common than previously thought and even found across languages for which a contact explanation may not reasonably be forwarded. Furthermore, his research points to parallels between non-related languages concerning the discourse function of ingressives and also casts some doubts on the suggestion that ingressive speech, where it occurs, is typically more common for females. Further research into these matters is clearly required.

For Britain and Ireland, there is very little objective evidence for ingressive speech based on audio recordings. In fact the only locality where thus far enough tokens have been elicited to enable a corpus study is Shetland (Sundkvist, in press). Based on the contact-induced explanation forwarded by Clarke and Melchers (2005), it would seem plausible for Shetland to have special status with regard to ingressive speech within the British Isles.

## Pulmonic ingressive speech in the Shetland Isles

#### 2. The Shetland Isles

The Shetland Isles are located in the North Sea, and constitute the northernmost part of the British Isles (see Figure 2). The current population is 21,988, of whom 6,830 live in Shetland's main town, Lerwick (General Register Office for Scotland 2010). The population's main sources of income are fishing, fish farming, oil, natural gas, and tourism. In addition many people are employed in public sector jobs, such as ferry services and transportation, and education, medical and social services.

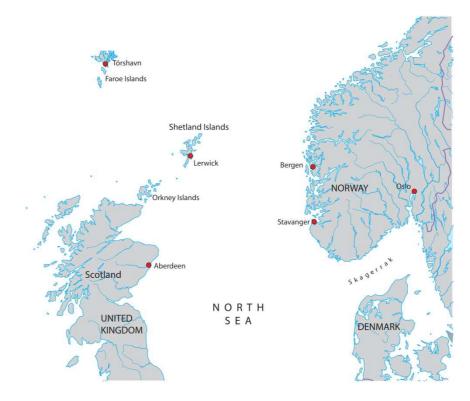


Figure 2. The Shetland Isles and the North Sea region

Beginning around 800 AD, the isles were settled by Vikings, who probably came from southwest Norway. In 1469, however, Shetland was ceded by Denmark to Scotland as part of a dowry. This gradually led to increasing influence from Scotland in Shetland. While land ownership previously has been governed by Udal law, Scottish lairds now took possession of the land. The handover also had a significant impact linguistically. Viking settlers had brought Old Norse, from which a local form, Norn, subsequently developed. As a result of Scottish rule, however, Norn was replaced by Lowland Scots. The nature and timing of this language shift is being debated to this day (Rendboe 1987; Millar 2008; Knooihuizen 2009; Barnes 2010). What is less controversial, however, is the fact that the traditional dialect that may currently be heard in Shetland–'Shetland dialect'–constitutes a form of Lowland Scots rather than a Nordic language, such as Norn.

Shetland's substantial and unique Scandinavian heritage opens up various possibilities regarding ingressives. Unlike elsewhere in Britain, a Scandinavian language constituted the dominant language for about 700-800 years. In addition, native speakers of a Scandinavian language could be found more recently than elsewhere, perhaps as late as the 18th or even early 19th century (Barnes 1998). Thus, based on the explanation by Clarke and Melchers (2005), it would not be unreasonable to suspect that Shetland may constitute a potential 'hot spot' for ingressives within the British Isles.

Recent results are consistent with such predictions. Based on a corpus of 40+ hours of interviews recorded between 1980 and 1985, Sundkvist (in press) was able to provide firm attestations for ingressive speech in Shetland. Within a set of 96 speakers, 27% of males and 32% of females were found to display at least one occurrence of ingressive speech. Women, however, contributed significantly more tokens, although potential gender differences concerning the overall use of feedback items and the total amount of speech could not be controlled for. Ingressive speech was found to occur on brief discourse particles representing 'yes' and 'no' responses, such as 'yeah', 'aye', 'mm', and 'no'. Looking at the phonetic detail, men displayed a preference for voiceless ingressives whereas women tended to use voiced ones most frequently.

#### 3. Method

The observational method, in somewhat varying form and with various modifications, has been utilized in a number of notable studies within the fields of dialectology and sociolinguistics, including the *Survey of English Dialects*. The method (sometimes referred to as the 'notebook' method) has been used by several scholars in their quest to document ingressive speech. Peters (1981), for instance, applied it extensively in Norway and the island community of Vinalhaven, Maine. Using this method, the researcher tries to observe members of a community, typically while engaging in daily matters and in natural conversations, and notes down occurrences of ingressive speech along with such details as the discourse particle on which it occurred and its discourse context.

In some instances the method has primarily been used out of necessity. Ingressive speech is often restricted to natural conversations and relatively intimate settings, and it has thus proved difficult to elicit a sufficient number of examples in interviews, especially if audio recorded. Furthermore, the use of ingressive speech may also be unevenly distributed among the members of a community, with some constituting "ingressive users" and other "non-users" (Hill & Zepeda 1999). In such instances it would of course be hard to select informants to interview before one has gained familiarity with the community and its members.

The notebook method has a number of limitations. Since typically only one observer is engaged, it is not possible to assess how high the inter-observer reliability may be. As there is no permanent record of the data, apart from the field notes, it is also not possible to evaluate the intra-observer reliability, or to subject the data to repeated analysis. In addition, acoustic phonetic methods cannot be used to further support the auditory analysis. In the study of ingressives, several co-occurring aspects of the speech event must be observed simultaneously – such as the speaker, the discourse particle, the context, and phonetic detail – which quite possibly reduces the reliability of the observations.

However, the method also has a number of benefits. It allows the researcher to study a greater proportion of a community than may normally be recruited for interviews. If the researcher is able to spend a significant amount of time in relatively small communities, and especially if over several periods, it may be possible to identify those members within the community that are ingressive users, and approach

them for further study. This approach has proved useful for the project 'Scandinavian features in Shetland phonology'. Finally, the notebook method also allows us to study individuals in a wider range of situations, and in natural conversations.

The discussion of ingressive speech which follows is based on observations which were made in Shetland and documented by means of the notebook method, during two three-month periods (autumn 2010 and spring 2011), while fieldwork was conducted for the project 'Scandinavian features in Shetland phonology'. The aim of the project, which is funded by Riksbankens Jubileumsfond, is to provide a phonological analysis of the vowel system and the segmental quantity system of Shetland dialect, in order to establish its position in relation to Scandinavian languages and Scots. A wide section of the Shetland community has been observed, as a result of the project's design and the researchers' wide network of contacts and friends throughout the isles. In addition to the Shetland data, informal observations from Swedish society, which were noted and dated, are also discussed, as are results from previous research. In the following discussion, the author will take the liberty of extracting points from the observational data which pertain to specific matters of interest. The author is fully aware that this approach does not involve the level of rigour that is attainable for instance in corpus studies, such as Sundkvist (in press). It is however used here primarily to enable a discussion of matters for which more reliable sources of information are not yet available, and it is also hoped that the issues brought up may inspire further research.

#### 4. Some observations on ingressive speech, in Shetland and elsewhere

## 4.1. Current decline within the Shetland community

Sundkvist (in press) was able to provide firm attestations of ingressive speech in Shetland: a sizeable proportion (32% women, 27% men) of the speakers interviewed between 1980 and 1985 displayed at least one instance of ingressive speech. Recent observations, however, suggest that ingressive speech is in decline. Based on experience from fieldwork throughout the archipelago between 2009 and 2011, the figures of 32% and 27% would seem to overestimate the current overall proportion of ingressive users in the Shetland community. Furthermore, most

ingressive users that may currently be found are above the age of 50-55. The youngest person from whom an ingressive was recently noted is a woman in her late thirties or early forties:

(2) 5 April 2011; female, approximately 40 years of age; Walls, Shetland During our first conversation in person, four tokens of ingressive *mm* for 'yes' were

used. This is most probably the youngest person in Shetland from whom I have heard an ingressive.

In the absence of more recently collected corpus data, these observations point towards a feature in decline; this is also in line with Thom's (2005) suggestion for Scotland as a whole.

## 4.2. The significance of 'affiliation'

Clarke and Melchers (2005: 66) suggest that the use of ingressive speech implies a sharing of opinion and contextual or situational knowledge between the participants in a conversation. They go on to propose that:

[...] ingressives are characterized by a feature which we will term [+affiliative], that is, a presupposition or presumption of shared or affiliative orientation on part of discourse interactants. These are particles the most usual pragmatic meaning of which is to establish and maintain interactional solidarity and harmony, particularly in informal conversational settings.' (Clarke & Melchers 2005: 67)

One observation that has been made repeatedly is that ingressives may appear at a very early stage, in the first-ever interaction with an individual. Several informants displayed them during our first meeting:

(3) 23 May 2011; male; Fair Isle, Shetland During the first meeting with [name], he used several ingressive tokens of yeah for 'yes'.

In some instances, they occurred at the very beginning of the first encounter:

(4) 29 June 2011; male; Yell, Shetland I had never met [name] prior to this occasion. He used an ingressive in the second sentence he ever said to me: yeah for 'yes'.

(5) 30 June 2011; female; Yell, Shetland

I had never met this person before. She used an ingressive very soon after meeting me for the first time, probably in the first 5-10 sentences. The ingressive occurred on yeah for 'yes'.

Some speakers even used ingressives during our first telephone conversation, before we had ever met in person:

(6) 15 August 2010; female; Out Skerries, Shetland

Phone call to [name] in Out Skerries. I had never spoken to or met her before; this was the first time we ever spoke. Two ingressives occurred during the conversations, on affirmative particles.

(7) 15 March 2011; male; Foula, Shetland

Telephone call to [name] in Foula. I had never spoken to [name] before or met him in person; this was the first time I ever spoke to him. Two ingressives occurred during the conversation

There are of course several alternative interpretations of such observations. While it is unlikely that much affiliation already existed in these cases, perhaps the speakers were simply particularly eager to establish it early in the encounter. Alternately, however, the use of a feature [+affiliative] is somewhat too radical. Although affiliation most probably increases the likelihood of occurrence, perhaps it is not a strict necessity, as implied by the featural formalization "+affiliative". As to a further possibility, Peters (1981) suggested that the use of ingressives often reflects a submissive speaker role or personality. The author's impression, however, does not support that interpretation for these particular individuals. While there certainly are discourse and interpersonal conditions which have to be met for ingressives to occur (cf. e.g. Eklund 2002), the author's impression is that some Shetlanders are relatively 'robust' ingressive users, in that they tend to use them across a wide range of contexts, as part of their normal speech repertoire.

#### 4.3. Acquisition and transference

Clarke and Melchers' (2005) explanation for the occurrence of ingressives within the North Atlantic Zone is based on waves of migration: in the first instance they were transported by Vikings to the British Isles, and at a second step, or rather steps, transmitted to North

America by British and Irish migrants. One prediction that would seem to follow from this hypothesis is that, when found in a certain locality within this overall region, ingressive speech probably reflects and reveals earlier settlement patterns for the locality in question (cf. e.g. Shorrocks 2003). This suggestion is made by Thom for Scotland:

Ingressive speech in Scotland is, at least for now, a living reminder of our shared ancestors and the way they expressed themselves. It's a bit like a really good story that gets passed from one generation to the next. All those who now know the story are linked to the group of people who originally met the storyteller. What is different is that ingressive speech has travelled through time like a gene, completely unintentionally. (2005, Yule: 17)

For Shetland the presence of ingressive speech is most naturally taken to reflect Viking settlements, as its Scandinavian heritage is substantial and any Gaelic influence mostly considered negligible.

At present there is no evidence to refute this 'longevity' explanation. There are, however, a number of aspects that ought to be considered simultaneously, and in conjunction with it, when attempting to explain the occurrence of ingressive speech within any English-speaking locality. As a general point, ingressives may not be as unique to the North Atlantic Zone as previously thought; and the apparent discourse parallels found within the region may also reflect more general principles and constraints governing the use of ingressives (Eklund 2008). Yet another set of issues concern the acquisition and transference of ingressive speech. Since there is unfortunately no published research specifically devoted to such matters, we have to begin by examining a range of reported observations which may provide hints to the acquisition and transference processes. Such observations are available from Sweden, Norway, and the USA.

Several observations suggest that the acquisition of ingressives is not restricted to childhood, but may occur during adolescence or even adulthood, in a second or foreign language. Peters reported that longterm residents in Norway usually pick up ingressives (1981: 242). He furthermore suggested that the process may be rapid: foreigners in Norway apparently adopted it "soon after their arrival" (1981: 29), and one South American exchange student in Vinalhaven, Maine, began using ingressives 'sometime in his second month on the island' (1981: 147). Peters also remarked that the adoption of ingressives by no means

was restricted to native speakers of closely related languages. In Norway it was observed for people who spoke English (various dialects), Romance languages, and non-Indo-European languages spoken in India, Sri Lanka, and Ethiopia (1981: 30). In Sweden, ingressive speech has been observed in SFI<sup>2</sup> classes among Chinese and Vietnamese females who have resided in the country for a couple of years. Conversely, Peters also presents evidence that ingressives may be lost or suppressed at the adolescent stage. Most children in Vinalhaven, Maine, apparently displayed ingressives, but during their high school years boys who were orientated towards maritime occupations stopped using them (Peters 1981: 148ff.).

There is also observational evidence that ingressive speech may cross language barriers, at least within the speech of an individual. Peters, for instance, remarked that long-term residents in Norway began using ingressive speech in their first language, at least in conversations with Norwegians (1981: 130). Furthermore, he presented anecdotal evidence that it may enter into the speakers' first language on a more long-term basis: one American woman who had acquired ingressives while living in Norway continued using it upon her return to the US, for which she was apparently ridiculed (1981: 252).

A number of observations supporting the possibility of crosslinguistic transference (within the individual) have been made in Sweden. As an example, a French academic residing in Sweden has been observed frequently using ingressives when speaking English. In addition the following two observations pertain to the same question:

While one cannot perhaps completely rule out the possibility that ingressive speech simply exists independently in French, Vietnamese and

<sup>(8) 12</sup> February 2011; Falun, Sweden

An adult Vietnamese woman who has resided in Sweden for approximately one year was observed using ingressive *yeah* 2-3 times, while speaking English.

<sup>(9) 5</sup> December 2011; Stockholm, Sweden

On a Stockholm underground train, an adult female thought to be of North African descent was observed using ingressive *yeah* 4-5 times while speaking an unidentified African language; no code-switching to Swedish or English was observed.

<sup>&</sup>lt;sup>2</sup> Swedish For Immigrants; Swedish proficiency courses for immigrants and refugees.

the unidentified (African) language in question, the frequent use of ingressives in Swedish would seem to offer a more likely explanation. If so, pulmonic ingressive speech has been transferred from one language into another, within the speech of an individual. Speculating further, it is also possible that the ingressive mechanism has been transferred across lexical items. Although the French and Vietnamese women may well have heard ingressive speech on the English discourse particles that they themselves used ('yeah')–especially before becoming proficient enough in Swedish to use it in daily encounters–in terms of frequency they have probably had more exposure to ingressive speech on Swedish discourse particles. In that case ingressive speech for them would, strictly speaking, not constitute a 'lexically transmitted' feature, as suggested by Clarke and Melchers (2005) for the North Atlantic Zone.

Again, it cannot be emphasized strongly enough that the set of observations brought up in no way level the diachronic or 'longevity' account for ingressive speech within the North Atlantic Zone, or are used here to intimate that an alternative one is more plausible. However, given the present lack of research into the acquisition and transference of ingressives, they provide some hints regarding matters that may need to be taken into account when attempting to explain the occurrence of ingressives in a specific locality. Perhaps what these observations amount to is a general possibility that pulmonic ingressive speech, partly attributable to its status of a paralinguistic feature, may have a relatively higher degree of freedom of transference than do the types of (linguistic) features more commonly investigated in historical and contact linguistics. If that is the case, it would leave the effect of contact, at any point during the history of a language or locality, as a particularly potent factor for the subsequent establishment of ingressive speech within the community or language variety.

## 5. Conclusion

This paper has dealt with a phenomenon which is severely understudied within varieties of English, namely pulmonic ingressive speech. Based on extracted points of observation, made during fieldwork for the project 'Scandinavian features in Shetland phonology', further detail about its currency in the Shetland community was provided; at present ingressives appear to be in decline in Shetland and are primarily found among older

speakers. One proposed condition for its usage was also called into question; while interpersonal affiliation probably increases the chances that ingressives will be used, a formalized requirement of "+affiliative" would appear to be somewhat too strict. In addition, based on observations made in Sweden, Norway, and the USA, a number of matters regarding the acquisition and transference of ingressives were brought up for discussion. One significant question for further research concerns the possibly greater freedom and ease of transference for ingressives, as it may have an impact upon proposed explanations for the occurrence of ingressives within certain localities and regional dialects.

Additional research is urgently needed to shed further light on the issues brought up in this paper. One desirable line of inquiry concerns the cross-linguistic currency of ingressive speech; in addition, where encountered, more detailed studies of its discourse functions are needed to better understand the degree of cross-linguistic 'sameness' for the phenomenon. As to varieties of English, ingressive speech is, by most accounts, currently in decline. It is thus hoped that archival recordings and already existing data sets will be examined, and indeed reexamined as ingressives may previously have been overlooked. As a complement observational studies should also be undertaken in communities where it is still possible. Such efforts may be the only way to seize the soon vanishing opportunity to gain further insight into an often overlooked, potential Nordic relic feature in regional Englishes.

#### References

- Barnes, Michael P. 1998. *The Norn Language of Orkney and Shetland*. Lerwick, Shetland: The Shetland Times Ltd.
- Barnes, Michael P. 2010. "The Study of Norn." Northern Lights, Northern Words. Selected Papers from the FRLSU Conference, Kirkwall 2009. Ed. Robert McColl Millar. Aberdeen: Forum for Research on the Languages of Scotland and Ireland. 26-47
- Catford, John C. 1988. A Practical Introduction to Phonetics. Oxford: Clarendon Press.
- Clarke, Sandra and Gunnel Melchers. 2005. "Ingressive discourse particles across borders: gender and discourse parallels across the North Atlantic." *Dialects across Borders: Selected papers from the* 11th international conference on methods in dialectology (Methods

XI), Joensuu, August 2002. Markku Filppula, Juhani Klemola, Marjatta Palander and Esa Pentitilä. Amsterdam/Philadelphia: John Benjamins. 51-72

- Eklund, Robert. 2002. "Ingressive speech as an indication that humans are talking to humans (and not to machines)." *Proceedings of ICSLP* '02, 16-20 September 2002, Denver, Colorado, vol. 2. 837-840.
- Eklund, Robert. 2007. "Pulmonic ingressive speech: a neglected universal?" *Proceedings of Fonetik 2007, Stockholm, TMH-QPSR, KTH 46.* 21-24.
- Eklund, Robert. 2008. "Pulmonic ingressive phonation: diachronic and synchronic characteristics, distribution and function in animal and human sound production and in human speech." *Journal of the International Phonetic Association* 38: 235-324.
- General Register Office for Scotland. 2010. *Census 2001 Scotland*. Source 2001 Census data supplied by the General Register Office for Scotland. ©Crown Copyright. <a href="http://www.scrol.gov.uk/scrol/common/home.jsp">http://www.scrol.gov.uk/scrol/common/home.jsp</a> (2010-10-30).
- Hill, Jane H. and Ofelia Zepeda. 1999. "Language, gender, and biology: pulmonic ingressive airstream in women's speech in Tohono O'odham." *Southwest Journal of Linguistics* 18(1): 15-40.
- Knooihuizen, Remco. 2009. "Shetland Scots as a new dialect: phonetic and phonological considerations." *English Language and Linguistics* 13(3): 483-501.
- Millar, Robert McColl. 2008. "The origins and development of Shetland dialect in light of dialect contact theories." *English World-Wide* 29(3): 237-67.
- Peters, Francis J. 1981. *The Paralinguistic Sympathetic Ingressive Affirmative in English and the Scandinavian Languages*. New York: New York University dissertation.
- Pitschmann, Louis A. 1987. "The linguistic use of the ingressive airstream in German and Scandinavian languages." *General Linguistics* 27: 153-161.
- Rendboe, Laurits. 1987. Det gamle shetlandske sprog (NOWELLE supplement vol. 3). Odense: Odense Universitetsforlag.
- Shorrocks, Graham. 2003. "Pulmonic ingressive speech in Newfoundland English: A case of Irish-English influence?" *The Celtic Englishes III*. Ed. Hildegard L.C. Tristram. Heidelberg: Universitätsverlag Winter. 374-389

- Steinbergs, Rita. 1993. The use of the paralinguistic sympathetic ingressive affirmative in speakers of English in the St. John's, Newfoundland area. Unpublished master's dissertation, Memorial University, St. John's, Newfoundland, Canada.
- Sundkvist, Peter. (in press). "Pulmonic ingressive speech in English: evidence from the Shetland Isles." *World Englishes*.
- Thom, Eleanor J. 2005. *The Gaelic Gasp and its North Atlantic Cousins:* A study of ingressive pulmonic speech in Scotland. Unpublished master's dissertation, University College London, London, UK.
- Thom, Eleanor J. 2005, Yule. "Is the Viking in you gasping for attention?" *The New Shetlander* 234: 15-17.