This document^{1,2} describes the tones of the Isaan variety spoken by Ton in the Isaan language projects on www.aakanee.com; any reference to "Isaan" or "Isaan language" is specifically meant to refer to this particular variety which is spoken in Nong Ruea district, Khon Kaen province (and certainly beyond). The tonal system of other Isaan varieties will be different.

Tonal System

Gedney has developed a system to quickly determine the number and distribution of tones in Tai languages, see [1]. This system is widely used to classify and compare different varieties and applies well to the Isaan language. See also [2] for corresponding Gedney charts for several Lao varieties spoken throughout North-Eastern Thailand.

Using an adapted Gedney word list, I distinguish five³ tones as follows:

	А	В	С	DL	DS
1 – voiceless friction			low-fa	Illing	
2 – voiceless unaspirated	mid	la i sula			mid
3 – voiceless glottalized		high			
4 – voiced	high-rising		high-fa	alling	high

Desc	ription of the fi	ve tones	
М	mid	A123	In fast speech, this is a flattish tone on mid level. On
		DS123	smooth syllables pronounced in isolation, in final position,
			which are stressed, or which have a Thai rising tone, it can
			have a falling-rising or even wave-like contour. This seems
			to be the tone with the highest degree of variability in its
			contour.
HR	high-rising	A4	This tone starts somewhere between mid and high and
			then rises further. Compared to H, HR usually starts lower
			and ends higher than H.
Н	high	B1234, DS4	This tone is quite high and, if long, flat.

¹ Thanks go to Luke Bruder-Bauer for valuable feedback.

² I'm not a linguist and can't guarantee that my analysis is accurate. Any feedback or correction is appreciated.

³ The identification of the tones in DL/DS (syllables with final stops) with the tones in A/B/C (open syllables) is partly a matter of convenience. There are audible differences in tone height and contour between counterparts with and without final stops but overall the match is not bad.

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LF	low-falling	C1, DL123	This tone starts well below the mid level and then drops.
HF	high-falling	C234. DL4	This tone starts mid-high and then drops down to low.

Approximative and stylized contours are as follows:



Writing system

There is currently no established writing system for Isaan. However, for native Tai words which have a Thai equivalent, it is often possible to infer the Isaan tone from the following three elements:

- consonant series of the Thai spelling (ก, ข or ค)
- syllable type (smooth, checked long, checked short)
- Thai tone/marker

This allows to use standard Thai spelling with a re-interpretation of the tone rules and some minor adaptions to transcribe this particular Isaan variety⁴ with correct tones.

Writing system – adaptions

- ល្អ is used for the ny-sound missing in Thai
- เอียย is used for the iai-triphthong which corresponds to เอื้อย⁵ in Thai
- I is counted as belonging to the n-class of consonants, not the e-class

⁴ This method, i.e., to reinterpret Thai tone rules/markers and leverage syllable type and consonant class, can be applied to transcribe a wide variety of Tai varieties. It may be confusing for bilingual native speakers who are literate only in Thai and used to one particular interpretation of tone markers. See also [3] for a more detailed discussion of the reasons why this approach works well for Tai languages.

⁵ In Ton's speech, often both forms coexist, e.g., เดียน and เดือน for 'month'.

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Writing system – tone rules

Three elements determine the tone of a syllable: the consonant series $(n, \mathfrak{A} \text{ or } P)$, the syllable type (smooth, checked long, checked short), and the tone mark.

Series	Syllable type	unmarked	ไม้เอก	ไม้โท	ไม้ดรี
ก	smooth	mid	high	high-falling	high-rising
	checked short	mid	high		high-rising
	checked long	low falling		high-falling	high-rising
ป	smooth	mid	high	low-falling	
	checked short	mid			
	checked long	low falling			
P	smooth	high-rising	high	high-falling	
	checked short	high			
	checked long	high-falling			

The following table contains example Gedney words. See the website for corresponding recordings to hear the tones.

Gedney cell	Tone	Isaan spelling	Thai (if different)	Translation
A1	mid	ង្ហ		ear
		ขา		leg
		หัว		head
		<u>ଶ</u> ିହ୍ୟ		two
A2	mid	ป		crab
		ตา		еуе
		กิน		to eat
		กา		Crow
A3	mid	บิน		to fly
		แดง		red
		บาน		to flower
		ดาว		star
A4	high-rising	มือ		hand
		ควย	ควาย	water buffalo
		นา		rice field
		ッフィ		snake
B1	high	ไข่		egg
		ข่า		galangal

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	Gedney cell	Tone	Isaan spelling	Thai (if different)	Translation
B2 high İn chicken idh to blow igh igh turtle idh turtle kind of a flute B3 high İwai shoulder idh idh bullfrog idh idh shoulder idh idh shoulder B4 high İdh idher idh idh idher saw B4 high İdh idher idh idh idher saw C1 low-falling İdh idh idh idh ifh ice C2 high-falling İnh inh idh inh nine idh inh nine idh inh nine idh inh nine idh inh nine idh inh nine idh inh nine idh inh nine idh inh nine idh inh nine idh inh nine idh inh nine idh inh			ถั่ว		general term for beans
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			เข่า		knee
μή turtle β3 high İuƙi Kind of aftute β3 high İuƙi Shoulder β4 high İuƙi Shoulder β4 high İuĥa Io socid β4 high İdr İdr Saw β4 high İdr İdr Saw β4 high İdr İdr Saw β4 high İdr İdr Saw β4 high İdr İdr Saw β4 high İdr İdr Saw β4 İdr İdr Saw Saw β4 İdr İdr Saw Saw β4 İdr İdr Saw Saw β4 İdr İdr Saw Saw β4 Idr Idr Saw Saw β4 Idr Idr Saw Saw β4 Idr	B2	high	ไก่		chicken
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B3 high ľvá shoulder b3 high ľvá bullfrog b4 high íšeu íseu groon B4 high íšeu íseu saw B4 high íšeu íseu saw B4 high íseu íseu saw B4 high íseu íseu saw B4 high íseu íseu saw B4 high íseu íseu saw B4 high íseu íseu saw B4 high íseu saw saw C1 low-falling íšn rice sit K3 íšn íšn shirt sit K3 íšn išn sit sit C2 high-falling ň'n nine sit Š1 íšn utif sugar cane sit Š1 íšn sugar cane šit sugar cane Š1 íšn utif sugar cane sit Š1 íšn utif sugar cane sit J1 lonu-falling jn utorgue sit					turtle
δbullfrogβ1to scold1/17groomB4highistenistenistenistenistenistenistenistenistenistenistenistenistenistenistenC1low-fallingistenistenistenistenistenistenistenistenistenistenistenistenistenC2high-fallingή1istenistenistenistenistenistensugar canej1j1istensugar canej2j1j2j1j2j1j2j1j2j2j2j2j2j2j2j2j2j2j2j2j2j2j3j2j4j2j4j2j5j2j5j2j4j2j5j2j5j2j4j2j5j2j5j2j5j2j5j2j5j2j6j2j6j2j6j2j7j2j6j2j6j2j7j2j6j2j7j2j6j2<			้อ		kind of a flute
	B3	high			shoulder
B4 high infa groom B4 high iase saw Via father father C1 low-falling ifin ifina idi ifina ifina shirt C1 low-falling ifin ifina shirt idi ifina ifina shirt shirt C2 high-falling ifina ifina nine idiau ifina ifina ifishone ifishone C2 high-falling ifina uopboard ifishone ifina ifina ifina uopboard ifishone C3 high-falling ifina uopboard uopboard ifina ifina uopboard uopboard uopboard C4 high-falling ifina uopboard uopboard ifina uopboard ifina uopboard uopboard DL1 low-falling ifina uopboard			้อึ่ง		bullfrog
B4 high idiu idia saw idi idi father C1 low-falling ifin ifina idi ifin ifina shirt C1 low-falling ifin ifina idi ifina ifina shirt C2 high-falling ifina ifina nine idiau ifina ifina shirt shirt C2 high-falling ifina ifina shirt idiau ifina ifina sugar cane ifina ifina sugar cane sugar cane ifina ifina sugar cane sugar cane ifina ifina sugar cane sugar cane ifina ifina sugar cane sugar cane ifina ifina sugar cane sugar cane ifina ifina sugar cane sugar cane ifina ifina sugar cane sugar cane			ด่า		to scold
КаfatherC1low-fallingได้ได้Low-fallingเข้าข้าวriceเช้ยเช้อshirtหม้อpotKňfiveforeC2high-fallingก้าวเก้าท้อนเข้าfishboneช้อนເอออสปcupboardC3high-fallingด้ายcupboardC3high-fallingด้ายcupboardC4high-fallingค้ามkareAnneรักsugar caneC4high-fallingก้าวkareDL1low-fallingกวดbottleDL1low-fallingกวดbottleDL2low-fallingกอดellowDL2low-fallingกอดwingDL2low-fallingนกดcombrace, to hugคอกนกกเอ marewingnอดนกกcombrace, to hugคอกนกกmouth					groom
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C1low-fallingιẳnẳnariceιẳểuιẳnashirtκινκινpotκινκινfiveC2high-fallingňnaιňnňhaιňnnineňhaιňncopoardC3high-fallingňnucopoardč3high-fallingňnucopoardč3high-fallingňnucopoardč4high-fallingňnusugar caneč4high-fallingňnusugar caneč1inninnesugar caneč1inneinnesugar caneč1inneinnesugar caneč2high-fallingňnusugar caneč3inneinnesugar caneč4high-fallingňnusugar caneč1inneinnesugar caneč2high-fallinginnesugar caneč3inneinnesugar caneč4high-fallinginnesugar canej1inneinnesugar canej1inneinnesugar canej2inneinneinnej3inneinnej4inneinnej4inneinnej4inneinnej4inneinnej4inneinnej4inneinnej4inneinnej4inneinnei5inne <td></td> <td></td> <td>พ่อ</td> <td></td> <td>father</td>			พ่อ		father
เสี้ยเสี้อshirtหม้อpotห้าfive(1)ท้าว1)เก้า <tr< td=""><td></td><td></td><td>ไอ้</td><td>ไว่</td><td>plantation</td></tr<>			ไอ้	ไว่	plantation
μ μ βμ μ μμ μ μμ μ μμ μμ μC2high-fallingμ μμ μnineμ μ μμμto feedμ μμωGedC3high-fallingμcupboardβ μωcupboardC3high-fallingμcupboardβ μμωsugar caneC4high-fallingμwaterμ μμωwaterμμωwaterμμωbottleDL1low-fallingμωμμωwingDL2low-fallingμωμμωwingμμωwingμμωwingμμωwingμμωwingμμωwing	C1	low-falling			rice
C2high-fallingẳଁnfiveL2high-fallingiňnnine11to feed11fishbone1ňicupboardC3high-fallingánucupboard66sugar cane66sugar cane6ňisugar cane6ňisugar cane6ňisugar cane6ňisugar cane6ňisugar cane6ňisugar cane1nandlesu			เสี้ย	เสื้อ	shirt
C2high-fallingňnιňninneČ3high-fallingňncupboardC3high-fallingốnucupboardČ3high-fallingốnucupboardČ4high-fallingốnusugar caneňnňnwaterčíinnewaterčíinnebouldeC4high-fallingốnuňninnewaterčíinnebouldeDL1low-fallingขวดDL2low-fallinginneDL2low-fallinginneinneinnecombrace, to huginneinneto namerinne <t< td=""><td></td><td></td><td>หม้อ</td><td></td><td>pot</td></t<>			หม้อ		pot
น้างเป้อนto feedท้างfishboneผู้cupboardC3high-fallingด้ายด้อยsugar caneด้ามhandleC4high-fallingด้วผู้หมดหมดค้ามC4high-fallingด้วผู้หมดหมดหมดกามto ngueหมดหมดกามhorseDL1low-fallingขาดหมดhatDL2low-fallingปีกกอดto embrace, to hugกอกto hammerบากเป้าก			ห้า		five
ห้างfishboneC3high-fallingตั้งcupboardbigh-fallingด้าย(cotton) thread6ด้อยsugar caneC4high-fallingด้ามhandleC4high-fallingก้างeyebrowbigh-fallingก้างwaterc4high-fallingก้างbigh-fallingม้าhorseDL1low-fallingบาดDL2low-fallingป้าbigh-fallingป้าwingDL2low-fallingป้าbigh-fallingม้าwingDL2low-fallingป้าbigh-fallingป้าwingbigh-falling<	C2	high-falling	ก้าว	เก้า	nine
C3high-fallingตู้ ด้ายcupboardC3high-fallingด้ายsugar caneด้ามด้ามhandleC4high-fallingด้ามwaterด้มพักsugar caneไปมักsugar caneDL1low-fallingมักhorseDL2low-fallingมีกbottleDL2low-fallingปีกswingDL1low-fallingปีกcuptonDL2low-fallingปีกcuptonปกswingswingswingDL1low-fallingปีกcombrace, to hugDL2low-fallingปีกswingL1swingswingswingDL2low-fallingปีกswingSwingswingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswingSwingswingswing <td< td=""><td></td><td></td><td>ป้อน</td><td></td><td>to feed</td></td<>			ป้อน		to feed
C3high-fallingด้าย(cotton) threadอ้อยsugar caneด้ามhandlec4high-fallingด้ามก้บwaterน้ำwaterอ้นtongueม้าhorseDL1low-fallingขวดหมวกbottleDL2low-fallingปีกกอดwingกอดto embrace, to hugกอกto hammerบกบกwoth			ก้าง		fishbone
C4high-fallingอ้อยsugar canehigh-fallingค้วมhandleน้ำwaterน้ำwaterก้นtongueม้าhorseDL1low-fallingขวดหมวกhatDL2low-fallingปีกกอดto embrace, to hugกอกto hammerบ่ากเป่าก			२ ही य		cupboard
C4high-fallingÅnAlleC4high-fallingÅneyebrowÅnwaterwaterÅntongueÅnhorseDL1low-fallingขวดbottleизэлhatDL2low-fallingปีกwingDL2low-fallingปีกto embrace, to hugพมวกto hammerมาดDL2low-fallingปีกพมวกwingManaพมวกManawingManaพมาด <td< td=""><td>C3</td><td>high-falling</td><td>ด้าย</td><td></td><td>(cotton) thread</td></td<>	C3	high-falling	ด้าย		(cotton) thread
C4high-fallingตั้วeyebrowน้ำwaterพื่นtongueพ้าhorseม้าbottleDL1low-fallingขวดหมวกhatDL2low-fallingปีกทอดto embrace, to hugกอดto hammerปากmouth			อ้อย		sugar cane
น้ำwaterลั้นtongueม้าhorseDL1low-fallingขวดหมวกbottleหมวกhatDL2low-fallingป้กกอดto embrace, to hugดอกto hammerบากmouth					handle
ม้าtongueDL1low-fallingขวดหมวกbottleหมวกhatDL2low-fallingปีกกอดto embrace, to hugดอกto hammerปากmouth	C4	high-falling	คิ้ว		eyebrow
DL1low-fallingม้ำhorseDL1low-fallingบิวดbottleหมวกhatellbowDL2low-fallingปีกwingกอดกอดto embrace, to hugบากเก่าการmouth			น้ำ		water
DL1low-fallingขวดbottleหมวกhatPDL2low-fallingที่กาellbowDL2low-fallingปีกwingกอดto embrace, to hugto hammerมากบากmouth			ลิ้น		tongue
หมวก hat ellbow DL2 low-falling ปีก wing to embrace, to hug กอด to hammer ปาก mouth			ม้า		horse
DL2Iow-fallingศอกellbowDL2Iow-fallingปีกwingกอดto embrace, to hugตอกto hammerปากmouth	DL1	low-falling	ฃวด		bottle
DL2low-fallingปีกwingกอดto embrace, to hugตอกto hammerปากmouth			หมวก		hat
กอด to embrace, to hug ตอก to hammer ปาก mouth			ศอก		ellbow
ตอก to hammer ปาก mouth	DL2	low-falling	ปีก		wing
ปาก mouth			กอด		to embrace, to hug
			ตอก		to hammer
DL3 low-falling บี่บ to squeeze			ปาก		mouth
	DL3	low-falling	ู ปับ		to squeeze

ISAAN RECORDINGS ON AAKANEE - TONES AND TRANSCRIPTION SYSTEM

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Gedney cell	Tone	Isaan spelling	Thai (if different)	Translation
		บอด		blind
		อาบ		to bathe
		ดอก		flower
DL4	high-falling	มืด		knife
		เลียด	เลือด	blood
		เซียก	เชื้อก	rope
		มอด		wood mite
DS1	mid	ผัก		vegetable(s)
		หก		six
		สิบ		ten
		หมัด		flea
DS2	mid	กบ		frog
		เจ็ด		seven
		เตะ		to kick
		จับ		to grasp, to catch
DS3	mid	เอิก	อก	chest
		เด็ด		to pluck (a flower)
		เป็ด		fish hook
		ดิบ		raw
DS4	high	นก		bird
		มด		ant
		คก	ครก	mortar (for crushing)
		เล็บ		nail

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