

FOREST AIMS TO CULTIVATE KIDS' INTEREST IN NATURE

By Deborah Manog

dmanog@staradvertiser.com

Standing beside a large bed of soil sparsely covered with sprouting Polynesian-introduced greenery including breadfruit and sweet potato, landscape architect Leland Miyano led a tour of the first completed section of the Children's Discovery Forest within the Honolulu Zoo on Feb. 7.

"In my lifetime I've seen a lot of extinction, and this is what drives me to get involved in a project like this," Miyano said, calling attention to a shell lei draped around his neck that was created from Tahitian land snails. The now-extinct snails were common in the 1970s until an invasive land snail was introduced to the islands and ate the native snails, he said.

Please see **FOREST, D3**



DENNIS ODA / DODA@STARADVERTISER.COM

The first phase of the Children's Discovery Forest, dedicated Feb. 7, showcases Polynesian-introduced greenery.

a mishmash of family fun and news



DENNIS ODA / DODA@STARADVERTISER.COM

FOREST: New zoo exhibit replicates native greenery

Continued from D1

"This is a reminder of how fragile our island systems are," Miyano said.

Modeled after the forest demonstration in Hilo's Panaewa Zoo, the Children's Discovery Forest is designed to replicate plants and trees that would be found in traditional Hawaiian coastal villages. The Hawaii Forest Institute and Hawaii Forest Industry Association hope students will use the Hawaiian forest ecosystem.

"In our modern society, children are facing a pandemic called nature deficit

disorder," Miyano said.

He says this exhibit is a tool against that "disorder" and will encourage children to engage in hands-on learning in the outdoors. He hopes to see activities where children get their hands dirty planting Hawaiian cultivars and Polynesian-introduced species.

Upon entering the zoo, the forest is to the left, past the section of birds and next to the hale lai and large banyan tree. The discovery forest is adjacent to the future site of a Native Hawaiian village — another cultural project in the works.

The first phase of the ex-

hibit, which broke ground in April 2013, cost \$262,897, said Hawaii Forest Institute President Travis Idol. Phases two and three will feature more native plants of the dryland mesic forest species and coastal strand vegetation. The entire project will cover just under an acre of land.

Idol said that with most of the background work done — from securing various permits to working with the different stakeholders in the project and having the final design approved — construction for the second and third phases should remain on schedule with the third section completed in 2016.

"It took longer than we thought ... but another year or two, we're hoping to have the rest of it done," Idol said.

The project would benefit the zoo's annual 750,000 visitors, teaching them about the importance of sustainability of native and Polynesian plants. The forest area will also provide a habitat for Hawaiian birds and invertebrates. Hawaiian ducks have already flown into the new exhibit.

"There is a potential for finding Hawaiian birds flying in one day, maybe even Kamehameha butterflies," Miyano said, pointing out a mamaki plant, which is the principal host plant to the

Dustin Miranda, left, and Leland Miyano planted ti leaves at the Children's Discovery Forest blessing ceremony at the Honolulu Zoo Feb. 7.

HONOLULU ZOO

>> **Address:** 151 Kapahulu Ave.

>> **Admission:** \$14 adults, \$6 children; kamaaina and military \$8, \$4

>> **Call:** 971-7171

>> **On the Net:** www.honolulu zoo.org

declining endemic Kamehameha butterfly.

Miyano explained some of the cultural lessons that are cultivated with the plants.

He explained how the apuwai kalo's cup-shaped leaves catch the rain, which was seen as "a gift from the heavens." Historically, water held in the kalo leaves was reserved for ali.

Idol says that there are so many more educational and cultural stories such as this that can be taught to children and adult visitors to the discovery forest.

"Our next step is to start bringing in different groups in the coming months and begin telling those stories," Idol said.



CONSOLIDATED THEATRES

Advance tickets at www.ConsolidatedTheatres.com
Showtime Information 593-3000

WARD STADIUM WITH TITAN XC	PEARLRIDGE 16
<p>TITAN XC DOLBY DIGITAL EXTREME CINEMA ATMOS</p> <p>★KINGSMAN: THE SECRET SERVICE (R)■ 10:30 1:30 4:30 7:30 10:30</p> <p>3D</p> <p>JUPITER ASCENDING 3D (PG-13)■ (1:25) 4:20</p> <p>THE SPONGEBOB MOVIE: SPONGE OUT OF WATER 3D (PG)■ 4:35 7:00 9:25</p> <p>FIFTY SHADES OF GREY (R)■ (10:15 10:45 11:00 11:30 11:55 12:20 12:45 1:10 1:35 2:00 2:25 2:50 3:15 3:40 4:05 4:30 4:55 5:20 5:45 6:10 6:35 7:00 7:25 7:50 8:15 8:40 9:05 9:30 9:55 10:20 10:45 11:10 11:35 12:00 12:25 12:50 1:15 1:40 2:05 2:30 2:55 3:20 3:45 4:10 4:35 5:00 5:25 5:50 6:15 6:40 7:05 7:30 7:55 8:20 8:45 9:10 9:35 10:00 10:25 10:50 11:15 11:40 12:05 12:30 12:55 1:20 1:45 2:10 2:35 3:00 3:25 3:50 4:15 4:40 5:05 5:30 5:55 6:20 6:45 7:10 7:35 8:00 8:25 8:50 9:15 9:40 10:05 10:30 10:55 11:20 11:45 12:10 12:35 13:00 13:25 13:50 14:15 14:40 15:05 15:30 15:55 16:20 16:45 17:10 17:35 18:00 18:25 18:50 19:15 19:40 20:05 20:30 20:55 21:20 21:45 22:10 22:35 23:00 23:25 23:50 24:15 24:40 25:05 25:30 25:55 26:20 26:45 27:10 27:35 28:00 28:25 28:50 29:15 29:40 30:05 30:30 30:55 31:20 31:45 32:10 32:35 33:00 33:25 33:50 34:15 34:40 35:05 35:30 35:55 36:20 36:45 37:10 37:35 38:00 38:25 38:50 39:15 39:40 40:05 40:30 40:55 41:20 41:45 42:10 42:35 43:00 43:25 43:50 44:15 44:40 45:05 45:30 45:55 46:20 46:45 47:10 47:35 48:00 48:25 48:50 49:15 49:40 50:05 50:30 50:55 51:20 51:45 52:10 52:35 53:00 53:25 53:50 54:15 54:40 55:05 55:30 55:55 56:20 56:45 57:10 57:35 58:00 58:25 58:50 59:15 59:40 60:05 60:30 60:55 61:20 61:45 62:10 62:35 63:00 63:25 63:50 64:15 64:40 65:05 65:30 65:55 66:20 66:45 67:10 67:35 68:00 68:25 68:50 69:15 69:40 70:05 70:30 70:55 71:20 71:45 72:10 72:35 73:00 73:25 73:50 74:15 74:40 75:05 75:30 75:55 76:20 76:45 77:10 77:35 78:00 78:25 78:50 79:15 79:40 80:05 80:30 80:55 81:20 81:45 82:10 82:35 83:00 83:25 83:50 84:15 84:40 85:05 85:30 85:55 86:20 86:45 87:10 87:35 88:00 88:25 88:50 89:15 89:40 90:05 90:30 90:55 91:20 91:45 92:10 92:35 93:00 93:25 93:50 94:15 94:40 95:05 95:30 95:55 96:20 96:45 97:10 97:35 98:00 98:25 98:50 99:15 99:40 100:05 100:30 100:55 101:20 101:45 102:10 102:35 103:00 103:25 103:50 104:15 104:40 105:05 105:30 105:55 106:20 106:45 107:10 107:35 108:00 108:25 108:50 109:15 109:40 110:05 110:30 110:55 111:20 111:45 112:10 112:35 113:00 113:25 113:50 114:15 114:40 115:05 115:30 115:55 116:20 116:45 117:10 117:35 118:00 118:25 118:50 119:15 119:40 120:05 120:30 120:55 121:20 121:45 122:10 122:35 123:00 123:25 123:50 124:15 124:40 125:05 125:30 125:55 126:20 126:45 127:10 127:35 128:00 128:25 128:50 129:15 129:40 130:05 130:30 130:55 131:20 131:45 132:10 132:35 133:00 133:25 133:50 134:15 134:40 135:05 135:30 135:55 136:20 136:45 137:10 137:35 138:00 138:25 138:50 139:15 139:40 140:05 140:30 140:55 141:20 141:45 142:10 142:35 143:00 143:25 143:50 144:15 144:40 145:05 145:30 145:55 146:20 146:45 147:10 147:35 148:00 148:25 148:50 149:15 149:40 150:05 150:30 150:55 151:20 151:45 152:10 152:35 153:00 153:25 153:50 154:15 154:40 155:05 155:30 155:55 156:20 156:45 157:10 157:35 158:00 158:25 158:50 159:15 159:40 160:05 160:30 160:55 161:20 161:45 162:10 162:35 163:00 163:25 163:50 164:15 164:40 165:05 165:30 165:55 166:20 166:45 167:10 167:35 168:00 168:25 168:50 169:15 169:40 170:05 170:30 170:55 171:20 171:45 172:10 172:35 173:00 173:25 173:50 174:15 174:40 175:05 175:30 175:55 176:20 176:45 177:10 177:35 178:00 178:25 178:50 179:15 179:40 180:05 180:30 180:55 181:20 181:45 182:10 182:35 183:00 183:25 183:50 184:15 184:40 185:05 185:30 185:55 186:20 186:45 187:10 187:35 188:00 188:25 188:50 189:15 189:40 190:05 190:30 190:55 191:20 191:45 192:10 192:35 193:00 193:25 193:50 194:15 194:40 195:05 195:30 195:55 196:20 196:45 197:10 197:35 198:00 198:25 198:50 199:15 199:40 200:05 200:30 200:55 201:20 201:45 202:10 202:35 203:00 203:25 203:50 204:15 204:40 205:05 205:30 205:55 206:20 206:45 207:10 207:35 208:00 208:25 208:50 209:15 209:40 210:05 210:30 210:55 211:20 211:45 212:10 212:35 213:00 213:25 213:50 214:15 214:40 215:05 215:30 215:55 216:20 216:45 217:10 217:35 218:00 218:25 218:50 219:15 219:40 220:05 220:30 220:55 221:20 221:45 222:10 222:35 223:00 223:25 223:50 224:15 224:40 225:05 225:30 225:55 226:20 226:45 227:10 227:35 228:00 228:25 228:50 229:15 229:40 230:05 230:30 230:55 231:20 231:45 232:10 232:35 233:00 233:25 233:50 234:15 234:40 235:05 235:30 235:55 236:20 236:45 237:10 237:35 238:00 238:25 238:50 239:15 239:40 240:05 240:30 240:55 241:20 241:45 242:10 242:35 243:00 243:25 243:50 244:15 244:40 245:05 245:30 245:55 246:20 246:45 247:10 247:35 248:00 248:25 248:50 249:15 249:40 250:05 250:30 250:55 251:20 251:45 252:10 252:35 253:00 253:25 253:50 254:15 254:40 255:05 255:30 255:55 256:20 256:45 257:10 257:35 258:00 258:25 258:50 259:15 259:40 260:05 260:30 260:55 261:20 261:45 262:10 262:35 263:00 263:25 263:50 264:15 264:40 265:05 265:30 265:55 266:20 266:45 267:10 267:35 268:00 268:25 268:50 269:15 269:40 270:05 270:30 270:55 271:20 271:45 272:10 272:35 273:00 273:25 273:50 274:15 274:40 275:05 275:30 275:55 276:20 276:45 277:10 277:35 278:00 278:25 278:50 279:15 279:40 280:05 280:30 280:55 281:20 281:45 282:10 282:35 283:00 283:25 283:50 284:15 284:40 285:05 285:30 285:55 286:20 286:45 287:10 287:35 288:00 288:25 288:50 289:15 289:40 290:05 290:30 290:55 291:20 291:45 292:10 292:35 293:00 293:25 293:50 294:15 294:40 295:05 295:30 295:55 296:20 296:45 297:10 297:35 298:00 298:25 298:50 299:15 299:40 300:05 300:30 300:55 301:20 301:45 302:10 302:35 303:00 303:25 303:50 304:15 304:40 305:05 305:30 305:55 306:20 306:45 307:10 307:35 308:00 308:25 308:50 309:15 309:40 310:05 310:30 310:55 311:20 311:45 312:10 312:35 313:00 313:25 313:50 314:15 314:40 315:05 315:30 315:55 316:20 316:45 317:10 317:35 318:00 318:25 318:50 319:15 319:40 320:05 320:30 320:55 321:20 321:45 322:10 322:35 323:00 323:25 323:50 324:15 324:40 325:05 325:30 325:55 326:20 326:45 327:10 327:35 328:00 328:25 328:50 329:15 329:40 330:05 330:30 330:55 331:20 331:45 332:10 332:35 333:00 333:25 333:50 334:15 334:40 335:05 335:30 335:55 336:20 336:45 337:10 337:35 338:00 338:25 338:50 339:15 339:40 340:05 340:30 340:55 341:20 341:45 342:10 342:35 343:00 343:25 343:50 344:15 344:40 345:05 345:30 345:55 346:20 346:45 347:10 347:35 348:00 348:25 348:50 349:15 349:40 350:05 350:30 350:55 351:20 351:45 352:10 352:35 353:00 353:25 353:50 354:15 354:40 355:05 355:30 355:55 356:20 356:45 357:10 357:35 358:00 358:25 358:50 359:15 359:40 360:05 360:30 360:55 361:20 361:45 362:10 362:35 363:00 363:25 363:50 364:15 364:40 365:05 365:30 365:55 366:20 366:45 367:10 367:35 368:00 368:25 368:50 369:15 369:40 370:05 370:30 370:55 371:20 371:45 372:10 372:35 373:00 373:25 373:50 374:15 374:40 375:05 375:30 375:55 376:20 376:45 377:10 377:35 378:00 378:25 378:50 379:15 379:40 380:05 380:30 380:55 381:20 381:45 382:10 382:35 383:00 383:25 383:50 384:15 384:40 385:05 385:30 385:55 386:20 386:45 387:10 387:35 388:00 388:25 388:50 389:15 389:40 390:05 390:30 390:55 391:20 391:45 392:10 392:35 393:00 393:25 393:50 394:15 394:40 395:05 395:30 395:55 396:20 396:45 397:10 397:35 398:00 398:25 398:50 399:15 399:40 400:05 400:30 400:55 401:20 401:45 402:10 402:35 403:00 403:25 403:50 404:15 404:40 405:05 405:30 405:55 406:20 406:45 407:10 407:35 408:00 408:25 408:50 409:15 409:40 410:05 410:30 410:55 411:20 411:45 412:10 412:35 413:00 413:25 413:50 414:15 414:40 415:05 415:30 415:55 416:20 416:45 417:10 417:35 418:00 418:25 418:50 419:15 419:40 420:05 420:30 420:55 421:20 421:45 422:10 422:35 423:00 423:25 423:50 424:15 424:40 425:05 425:30 425:55 426:20 426:45 427:10 427:35 428:00 428:25 428:50 429:15 429:40 430:05 430:30 430:55 431:20 431:45 432:10 432:35 433:00 433:25 433:50 434:15 434:40 435:05 435:30 435:55 436:20 436:45 437:10 437:35 438:00 438:25 438:50 439:15 439:40 440:05 440:30 440:55 441:20 441:45 442:10 442:35 443:00 443:25 443:50 444:15 444:40 445:05 445:30 445:55 446:20 446:45 447:10 447:35 448:00 448:25 448:50 449:15 449:40 450:05 450:30 450:55 451:20 451:45 452:10 452:35 453:00 453:25 453:50 454:15 454:40 455:05 455:30 455:55 456:20 456:45 457:10 457:35 458:00 458:25 458:50 459:15 459:40 460:05 460:30 460:55 461:20 461:45 462:10 462:35 463:00 463:25 463:50 464:15 464:40 465:05 465:30 465:55 466:20 466:45 467:10 467:35 468:00 468:25 468:50 469:15 469:40 470:05 470:30 470:55 471:20 471:45 472:10 472:35 473:00 473:25 473:50 474:15 474:40 475:05 475:30 475:55 476:20 476:45 477:10 477:35 478:00 478:25 478:50 479:15 479:40 480:05 480:30 480:55 481:20 481:45 482:10 482:35 483:00 483:25 483:50 484:15 484:40 485:05 485:30 485:55 486:20 486:45 487:10 487:35 488:00 488:25 488:50 489:15 489:40 490:05 490:30 490:55 491:20 491:45 492:10 492:35 493:00 493:25 493:50 494:15 494:40 495:05 495:30 495:55 496:20 496:45 497:10 497:35 498:00 498:25 498:50 499:15 499:40 500:05 500:30 500:55 501:20 501:45 502:10 502:35 503:00 503:25 503:50 504:15 504:40 505:05 505:30 505:55 506:20 506:45 507:10 507:35 508:00 508:25 508:50 509:15 509:40 510:05 510:30 510:55 511:20 511:45 512:10 512:35 513:00 513:25 513:50 514:15 514:40 515:05 515:30 515:55 516:20 516:45 517:10 517:35 518:00 518:25 518:50 519:15 519:40 520:05 520:30 520:55 521:20 521:45 522:10 522:35 523:00 523:25 523:50 524:15 524:40 525:05 525:30 525:55 526:20 526:45 527:10 527:35 528:00 528:25 528:50 529:15 529:40 530:05 530:30 530:55 531:20 531:45 532:10 532:35 533:00 533:25 533:50 534:15 534:40 535:05 535:30 535:55 536:20 536:45 537:10 537:35 538:00 538:25 538:50 539:15 539:40 540:05 540:30 540:55 541:20 541:45 542:10 542:35 543:00 543:25 543:50 544:15 544:40 545:05 545:30 545:55 546:20 546:45 547:10 547:35 548:00 548:25 548:50 549:15 549:40 550:05 550:30 550:55 551:20 551:45 552:10 552:35 553:00 553:25 553:50 554:15 554:40 555:05 555:30 555:55 556:20 556:45 557:10 557:35 558:00 558:25 558:50 559:15 559:40 560:05 560:30 560:55 561:20 561:45 562:10 562:35 563:00 563:25 563:50 564:15 564:40 565:05 565:30 565:55 566:20 566:45 567:10 567:35 568:00 568:25 568:50 569:15 569:40 570:05 570:30 570:55 571:20 571:45 572:10 572:35 573:00 573:25 573:50 574:15 574:40 575:05 575:30 575:55 576:20 576:45 577:10 577:35 578:00 578:25 578:50 579:15 579:40 580:05 580:30 580:55 581:20 581:45 582:10 582:35 583:00 583:25 583:50 584:15 584:40 585:05 585:30 585:55 586:20 586:45 587:10 587:35 588:00 588:25 588:50 589:15 589:40 590:05 590:30 590:55 591:20 591:45 592:10 592:35 593:00 593:25 593:50 594:15 594:40 595:05 595:30 595:55 596:20 596:45 597:10 597:35 598:00 598:25 598:50</p>	